DENSO

HAND-HELD TERMINAL
BHT-M70

Model			2D Code Model	
			Wireless LAN connection	Wireless LAN+Wireless WAN
			BHT-M70-QW	BHT-M70-QWG
Operating System			Android™ 10	
CPU			Qualcomm® SDM660 64 bit 2.20 GHz (Octa-Core)	
Memory	RAM		4 GB	
	Flash ROM		64 GB	
Display	Screen size and resolution[1]		4.0-inch WVGA (480×800 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		27 keys (including the power key), cursor keys, and 3 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[4]	5 GHz-band (W52, W53, W56 and W58) 2.4 GHz-band (1 to 13 channels) *USA, Canada,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 [4]		—	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 TDD-LTE (4G) - Bands 39, 40, 41 W-CDMA/UMTS/HSPA/HSPA+ (3G) - Bands 1, 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[5]		ISO/IEC14443A&B, FeliCa, ISO/IEC15693(RFID)	
Camera	Rear		13-megapixel auto-focusing with a LED light	
Card Slot	Memory		microSD (SDHC and SDXC (up to128 GB)) SDHC Speed class 4 support	
	SIM		—	Nano SIM×2 DSDV(4Gx4G)
Microphone receiver			Attached [6]	
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	
	USB charging		Compliant with Qualcomm® Quick Charge™ 3.0	
	Operating time[9]	BT3(3050 mAh)	Approx. 20 hours [10]	
Environmental Performance	Operating temperature[7]		-20°C to 50°C	
	Operating humidity		5 to 95%RH (non-condensing and non-icing)	
	Protective class[8]		IP65 and IP67	
	Drop resistance[8]		60 times or more from 1.5 m above concrete floor, 2.5 m	
Weight (including the battery)			Approx. 330 g(including BT3)	

*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. Actual operating channels/frequencies and bandwidths may vary depending on local regulations and approval agencies.
*5. Before using the NFC function, perform test reading sufficiently using the target NFC card.
*6. 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.
*7. 0°C to 40°C during charging.
*8. These are the values tested at a room temperature, and not guaranteed values.
*9. The operating time is a reference value at a room temperature and may differ depending on the operating conditions.
*10. 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.

Equipped with Android™ 10

Outstanding multifunctionality and
unprecedented robustness

Dimensions unit : mm（All reference values）

BHT-M70-QW BHT-M70-QWG
72   39
182
30

Package includes :

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

Options

■ Battery
・3050 mAh battery : BT3

■ Charger
・4-slot main unit charger : CH-M70-4[*1]
・4-slot battery charger : CH-BT1-4[*1]
・AC adaptor
(Quick Charge™3.0 supported) : AD8

■ Communication unit
・USB type
: With a spare battery charger
: CU-M70U[*1]
・USB type
: Without a spare battery charger
: CU-M70UQ(Quick Charge™3.0 supported)[*1]
・LAN type
: With a spare battery charger
: CU-M70L[*1]

■ Others
・Waist case (Planned for sale)
・Stylus pen : PNBHT-1700
・USB Type-C - Type-A conversion cable
(1.5m) : B00-US1500/4A-4C
・USB Type-C - Audio Jack conversion cable
(3.5mm) : CB00-US100/3-4C[*2]

*1 AC adaptor(AD3) sold separately.
*2 You also need the conversion cable to equip the BHT terminal with earphones and other devices.

CREATE YOUR NEW WORKSTYLE
NEW BHT®

High operability and scalability to meet on-site and operational needs.

4.0 inches (Actual size)

DENSO

12:00

Google   Play Sto...

SCAN
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CREATE YOUR NEW WORKSTYLE
NEW BHT®

BHT-M70 can be used comfortably in various purposes, such as for tasks
handling large amounts of information or communication among employees,
by utilizing its scalability as an Android device to perform multiple tasks on a single device and its large 4.0-inch screen.
Of course, it also contributes to further efficiency in conventional tasks with its improved scanning performance and operability.

Manual

STEP1

STEP2
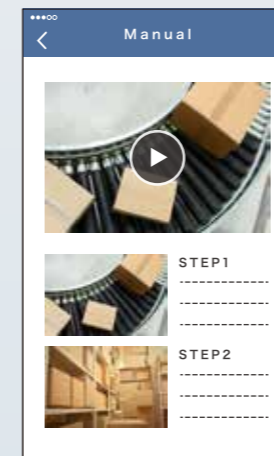
STYLE 01 — Logistics & Retailing

Improvement of on-site staff's operational skills

Delivery procedures can be shared in manuals (also on video).
Easy for all staff to understand, and it improves operational
efficiency, even in workplaces with frequent turnover.

Search

41 min (7.3km)
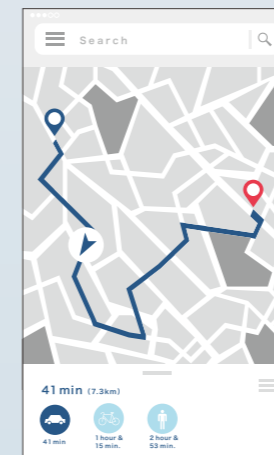
STYLE 02 — Transportation & Logistics

**Navigation map displayed on the screen
for direct and speedy delivery**

The navigation function provided by the BHT-M70 helps
the driver quickly reach the destination to meet an urgent
request for cargo pickup.

STYLE 03 — Logistics & manufacturing

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*

* For mobile barcode terminals for business use, as of October 2020, surveyed by the company

Highest-level resistance against 2.5-meter drops in in its product class.
Drop resistance of over 1.5 m x 60 times, strong enough for daily operations.

Designed to provide high resistance against shocks

Uniquely designed to provide high resistance against drops on concrete floors with a frame containing light and rigid metal 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.

Designed for comfortable use

Comfortable one-handed operation
A hand-fit grip design with both a large screen and keyboard fitted on it.

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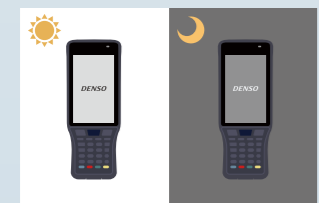
Screen brightness adjusts automatically to reduce eye stress on the user
Equipped with a new function to automatically adjust the screen brightness according to the environment, thereby reducing the user's stress and helping increase their operational efficiency.

Universal design
Universal colors and fonts are adopted in consideration of differences in color perception, thereby making it a hand-held terminal that is easy for many people to use.

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-M60 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-M70

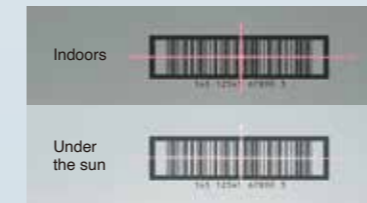Note: When labels specified by the company are used and are scanned sequentially at a fixed distance

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.

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

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.

3050mAh battery

Operating Time*   20 hours

Easy-to-replace battery

The large release lever is intended to allow for easy battery replacement. Replace the battery easily, even if it runs out while you are using the terminal.

* 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.

(Image for illustrative purposes only)

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🔋 Battery monitor

"Battery is deteriorating."
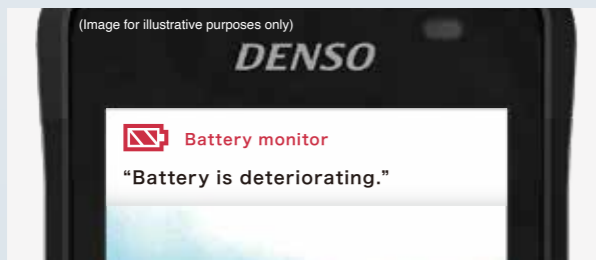
Detection of battery deterioration to prevent related incidents

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.

*M80 image.

Precise communication with Dual SIM

BHT-M70 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.

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- M70 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.