Full support from introduction to operation

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

Support for introduction provided by the BHT team

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 developed software products 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 usable with BHT products.

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.

■ Support for the OS
As the developer of BHT-OS, we will supply the OS update patches on a continual basis. We will offer support for our own developed OS on a continual basis so that customers can use the terminals for a long time.

DENSO

HAND-HELD TERMINAL
BHT-S40/S30

Sophisticated and stable OS
Hand-held terminal equipped with
DENSO WAVE's own BHT-OS

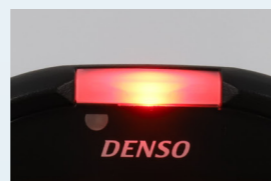### CREATE YOUR NEW WORKSTYLE
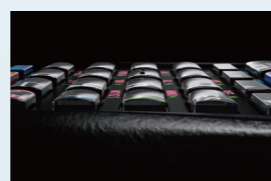**NEW BHT®**

Light and comfortable to use.

Large LED with high visibility

Easy to recognize the completion of reading and error messages even while working in a place where the screen visibility is limited. The display color was selected in consideration of the diversity of people's color vision.
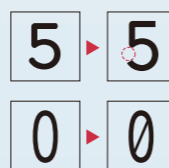
Easy-to-press keys

The dome-shaped keys are laid out in a manner which enables smooth data entry.
The scan key is large enough for error-free operation.

Universal design

We have adopted universal colors and universal fonts in consideration of the diversity of people's color vision, thereby making it a handy terminal that is easy to use for many people.

5 ▸ 5
0 ▸ 0

Easy-to-read font

Color scheme for the keys

| FN | ALP | ESC | MENU | Key color |

| FN | ALP | ESC | MENU | Type 1 color vision |

Difficult to differentiate since the colors look similar

BHT-S40/S30

| F1 | F2 | F3 | F4 |

| F1 | F2 | F3 | F4 |

Easy to differentiate since each color looks different

Optimal center of gravity design for comfort of use

The total length is minimized, and the battery, screen and reader are laid out in an optimal manner to achieve a center of gravity design that provides comfort of use.

Easy to hook your finger around

Shaped in a manner that makes it easy to hook your index finger onto it.

Uniquely designed for easy gripping

The width of the grip is minimized to make it easier to grip it even with the smaller hand of a woman. A cylindrical battery is adopted to give the grip an easier-to-grip shape.
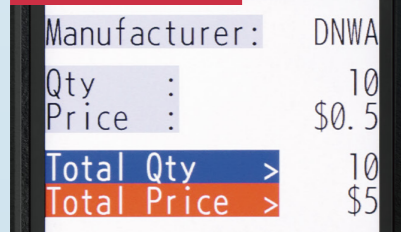You can therefore use it for many hours without feeling stress on the hand.

Easy-to-replace battery

You can easily open/close the battery compartment simply by pressing the "PUSH" button on the cover.

Lineup of models that can be used selectively according to the place of use and usage

3.2-inch large screen

The large WVGA screen provides high legibility and is suitable for use at stores to increase the efficiency of product ordering, etc.

BHT-S40

BHT-S30

2.4-inch compact screen

Is highly portable and can used for real-time product picking in a warehouse, being equipped with high-speed Wi-Fi communication function.

Reasons why BHT-OS is selected by customers

Long time support

We provide support for our own developed OS on a continual basis so that customers can use the terminals for a long time with peace of mind.

Stable operation

The efficient system structure ensures stable operation, limits the download of apps unrelated to business and omits unnecessary functions.

High compatibility with conventional models

Apps used on other BHT-OS-based models can be used without changing the screen layout. *in compatible mode

Read faster, works harder.

Equipped with a new decode engine and high-density sensor, BHT-S40/S30 provides outstanding reading performance. The high-performance CPU adopted for the device enables high-speed processing.

Just "trace" for serial reading

By adopting a new decode engine, we have more than doubled the reading speed compared with conventional products. With the terminal, you only need to trace the labels of items on the shelves and those of stacked items for serial reading. You can also perform inventory work, which usually takes a whole day, in half the time.
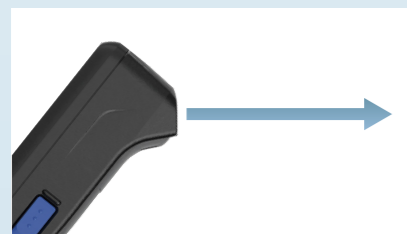
*Only for 2D code models

Conventional product	Doubled or more relative to conventional products
BHT-S40/S30	

*When labels specified by the company are used and are read sequentially at a fixed distance

For details of reading, please refer to the page.

Just "hold over" for easy reading

Can easily read the label (code) from a distance of 1m

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

*Only for 2D code models

Needs no skills for reading

Indoors

Under the sun

The laser marker, which provides high visibility even under the sun, eliminates the need to acquire skills to read labels covered with wrapping films and enables reading labels outdoors.

*Only for 2D code models

Can read 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 read by the terminal.

*Only for 2D code models

Covered by wrapping film   DPM

Supports a comfortable work environment.

USB Type-C cable

Communication unit   1900mAh battery

3200mAh battery

Total Qty   >   10
Total Price   > $5
Ent:R   Master
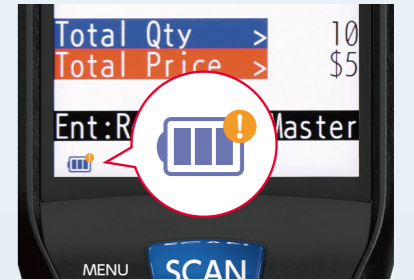MENU   SCAN

(Image for illustrative purposes only)

Direct charging supported

Widely used Type-C cable supported, allowing recharging with mobile batteries.

Usable for many hours with peace of mind

The unique power-saving design prolongs the operation hours. Moreover, two types of batteries can be used according to the usage.

Detection of battery deterioration to prevent related incidents

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

Higher communication speed for higher operational efficiency

IEEE 802.11 ac supported for high-speed communication. You can use the terminal with peace of mind even in the most advanced infrastructure environment.

Outstanding robustness.

Durable against 2.5-meter drops.
*Durable against 2.0-meter drops for the S30
The polycarbonate body is light and highly resistant to shocks.
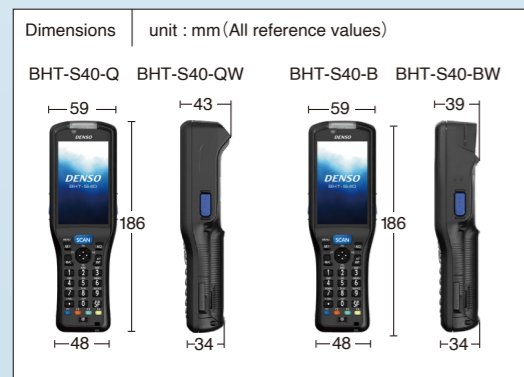
Able to withstand harsh environments

With S40 IP65- and S30 IP 54-compliant, you can use the terminals outdoors as well as in dusty factories with peace of mind.

DENSO   BHT-S40

HANDY TERMINAL BHT-S40

Model		2D Code Model		バーコードモデル	
		Bluetooth®Model	Bluetooth®+Wireless LAN Model	Bluetooth®Model	Bluetooth®+Wireless LAN Model
		BHT-S40-Q	BHT-S40-QW	BHT-S40-B	BHT-S40-BW
Operating System		BHT-OS			
CPU		32-bit RISC microprocessor			
Memory	Flash memory	128 MB (with a user area of approx. 84 MB)			
Display	Screen size and resolution *1	3.2-inch WVGA (480×800 dots)			
	Display device	Dot matrix liquid crystal display (color)			
	Number of displayed characters *2 — Small font	10 chrs. x 16 lines (full-width) or 20 chrs. x 16 lines (half-width)(QVGA-compatible mode: 10 chrs. x 13 lines (full-width) or 20 chrs. x 13 lines (half-width))			
	Number of displayed characters *2 — Standard font	8 chrs. x 13 lines (full-width) or 16 chrs. x 13 lines (half-width)(QVGA-compatible mode: 8 chrs. x 10 lines (full-width) or 16 chrs. x 10 lines (half-width))			
	Backlight	White LED			
Reader	Reading method	Area sensing		Advanced Scan Plus (CCD)	
	Supported code — 2D code	QR code, Micro QR code, SQRC, PDF417, Micro PDF417, Maxi code, Data Matrix (ECC200), and GS1 Composite		—	
	Supported code — Barcode	EAN-13/8 (JAN-13/8), UPC-A/E, UPC/EAN (with add-on), Interleaved 2 of 5, Codabar (NW-7), CODE39, CODE93, CODE128, GS1-128 (EAN-128), Standard 2 of 5 (STF), and GS1 DataBar(RSS)			
	Minimum resolution — 2D code	0.127 mm		—	
	Minimum resolution — Barcode	0.076 mm		0.125 mm	
	Marker	Cross guide marker		—	
	Confirmation of reading	3 color (blue, red, and green) LEDs, speaker, and vibrator			
Key Entry	Number of keys	21 keys (including the power key), cursor keys, and 3 trigger keys			
Communication	Wireless LAN connection — Applicable standard	—	Compliant with IEEE.802.11ac/a/b/g/n	—	Compliant with IEEE.802.11ac/a/b/g/n
	Wireless LAN connection — Frequency	—	5GHz-band (W52,W53,W56 and W58) 2.4GHz-band (1 to 13 channels)	—	5GHz-band (W52,W53,W56 and W58) 2.4GHz-band (1 to 13 channels)
	Wireless LAN connection — Access method	—	Infrastructure mode and ad-hoc mode	—	Infrastructure mode and ad-hoc mode
	Wireless LAN connection — Security	—	Encryption : WEP (40/128), TKIP, and AES WPA authentication : WPA and WPA2 User authentication : PSK, EAP-TLS, and PEAP	—	Encryption : WEP (40/128), TKIP, and AES WPA authentication : WPA and WPA2 User authentication : PSK, EAP-TLS, and PEAP
	Bluetooth® connection	Bluetooth® Version 5.0+EDR/LE(Supported profiles: GAP, SPP, HID, DUN, and GATT)			
	Wired connection	USB Version 2.0 (USB Type-C)			
Power Supply	Main battery	Lithium-ion battery			
	Operating time *4 — BT2S(1900 mAh)	55 hours*5/14 hours*6	55 hours*5/21 hours*7	57 hours*5/15 hours*6	57 hours*5/23 hours*7
	Operating time *4 — BT2(3200 mAh)	95 hours*5/25 hours*6	95 hours*5/40 hours*7	98 hours*5/27 hours*6	98 hours*5/42 hours*7
Card Slot		FAT32-compliant microSD or microSDHC (up to 32 GB) × 1			
Additional Functions		Clock, speaker, vibrator, battery voltage indicator, keyboard backlight, and remote wakeup			
Environmental Performance	Operating temperature *3	−20°C to 50°C			
	Operating humidity	5 to 95%RH (non-condensing and non-icing)			
	Protective class *8	IP65			
	Drop resistance *8	Above concrete floor, 2.5 m, 60 times or more from 1.5 m			
Weight (including the battery)		Approx. 242 g (including BT2S), approx. 256 g (including BT2)			

*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. The small font is 48-dot size and the standard 60-dot size. There are also 24-dot, 30-dot, and 40-dot fonts.
*3. 0 °C to 40 °C during charging.
*4. The operating time is a reference value at a room temperature and may differ depending on the operating conditions.
*5. Reading once per five seconds with the LCD backlight lit only during reading.
*6. One cycle (30seconds): Reading (1second), Bluetooth communication (sending 1KB through a continuous connection), screen update (1second), and wait, with the LCD backlight lit only during reading, Bluetooth communication, and screen update.
*7. Assuming a ratio among reading, wireless communication, screen update, and wait of 1:1:1:20, with the LCD backlight lit only during reading, wireless communication, and screen update.
*8. These are the values tested at a room temperature, and not guaranteed values.
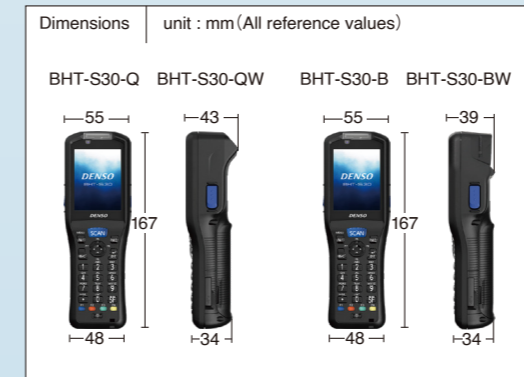
Dimensions　unit : mm（All reference values）

BHT-S40-Q　BHT-S40-QW　BHT-S40-B　BHT-S40-BW

59　43　59　39
186　186
48　34　48　34

HANDY TERMINAL BHT-S30

Model		2D Code Model		バーコードモデル	
		Bluetooth®Model	Bluetooth®+Wireless LAN Model	Bluetooth®Model	Bluetooth®+Wireless LAN Model
		BHT-S30-Q	BHT-S30-QW	BHT-S30-B	BHT-S30-BW
Operating System		BHT-OS			
CPU		32-bit RISC microprocessor			
Memory	Flash memory	128 MB (with a user area of approx. 84 MB)			
Display	Screen size and resolution *1	2.4-inch QVGA (240×320 dots)			
	Display device	Dot matrix liquid crystal display (color)			
	Number of displayed characters *2 — Small font	10 chrs. x 13 lines (full-width) or 20 chrs. x 13 lines (half-width)			
	Number of displayed characters *2 — Standard font	8 chrs. x 10 lines (full-width) or 16 chrs. x 10 lines (half-width)			
	Backlight	White LED			
Reader	Reading method	Area sensing		Advanced Scan Plus (CCD)	
	Supported code — 2D code	QR code, Micro QR code, SQRC, PDF417, Micro PDF417, Maxi code, Data Matrix (ECC200), and GS1 Composite		—	
	Supported code — Barcode	EAN-13/8 (JAN-13/8), UPC-A/E, UPC/EAN (with add-on), Interleaved 2 of 5, Codabar (NW-7), CODE39, CODE93, CODE128, GS1-128 (EAN-128), Standard 2 of 5 (STF), and GS1 DataBar(RSS)			
	Minimum resolution — 2D code	0.127 mm		—	
	Minimum resolution — Barcode	0.076 mm		0.125 mm	
	Marker	Cross guide marker		—	
	Confirmation of reading	3 color (blue, red, and green) LEDs, speaker, and vibrator			
Key Entry	Number of keys	21 keys (including the power key), cursor keys, and 3 trigger keys			
Communication	Wireless LAN connection — Applicable standard	—	Compliant with IEEE.802.11ac/a/b/g/n	—	Compliant with IEEE.802.11ac/a/b/g/n
	Wireless LAN connection — Frequency	—	5GHz-band (W52,W53,W56 and W58) 2.4GHz-band (1 to 13 channels)	—	5GHz-band (W52,W53,W56 and W58) 2.4GHz-band (1 to 13 channels)
	Wireless LAN connection — Access method	—	Infrastructure mode and ad-hoc mode	—	Infrastructure mode and ad-hoc mode
	Wireless LAN connection — Security	—	Encryption : WEP (40/128), TKIP, and AES WPA authentication : WPA and WPA2 User authentication : PSK, EAP-TLS, and PEAP	—	Encryption : WEP (40/128), TKIP, and AES WPA authentication : WPA and WPA2 User authentication : PSK, EAP-TLS, and PEAP
	Bluetooth® connection	Bluetooth® Version 5.0+EDR/LE(Supported profiles: GAP, SPP, HID, DUN, and GATT)			
	Wired connection	USB Version 2.0 (USB Type-C)			
Power Supply	Main battery	Lithium-ion battery			
	Operating time *4 — BT2S(1900 mAh)	55 hours*5/14 hours*6	55 hours*5/21 hours*7	57 hours*5/15 hours*6	57 hours*5/23 hours*7
	Operating time *4 — BT2(3200 mAh)	95 hours*5/25 hours*6	95 hours*5/40 hours*7	98 hours*5/27 hours*6	98 hours*5/42 hours*7
Card Slot		FAT32-compliant microSD or microSDHC (up to 32 GB) × 1			
Additional Functions		Clock, speaker, vibrator, battery voltage indicator, keyboard backlight, and remote wakeup			
Environmental Performance	Operating temperature *3	−20°C to 50°C			
	Operating humidity	5 to 95%RH (non-condensing and non-icing)			
	Protective class	IP54			
	Drop resistance	Above concrete floor, 2.0 m, 60 times or more from 1.2 m			
Weight (including the battery)		Approx. 219 g (including BT2S), approx. 233 g (including BT2)			

*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. The small font is 24-dot size and the standard 30-dot size. There are also 16-dot and 40-dot fonts.
*3. 0 °C to 40 °C during charging.
*4. The operating time is a reference value at a room temperature and may differ depending on the operating conditions.
*5. Reading once per five seconds with the LCD backlight lit only during reading.
*6. One cycle (30seconds): Reading (1second), Bluetooth communication (sending 1KB through a continuous connection), screen update (1second), and wait, with the LCD backlight lit only during reading, Bluetooth communication, and screen update.
*7. Assuming a ratio among reading, wireless communication, screen update, and wait of 1:1:1:20, with the LCD backlight lit only during reading, wireless communication, and screen update.
*8.These are the values tested at a room temperature, and not guaranteed values.

Dimensions　unit : mm（All reference values）

BHT-S30-Q　BHT-S30-QW　BHT-S30-B　BHT-S30-BW

55　43　55　39
167　167
48　34　48　34