

Supports any system.

Applications for BHT-1300 series

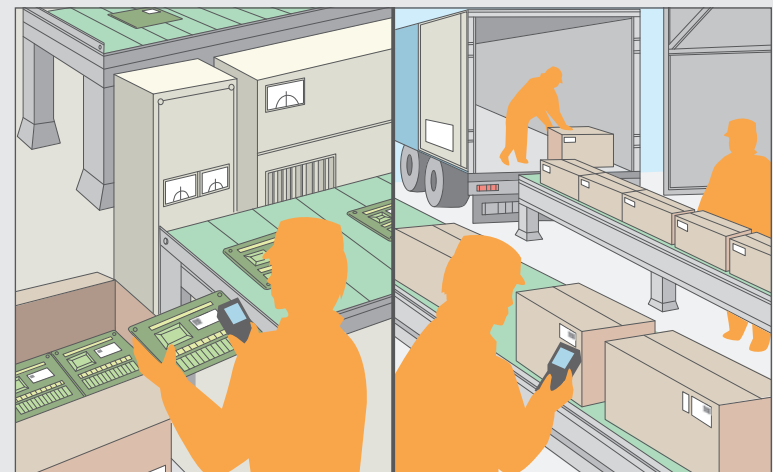
In retail/wholesale fields

- It can be held comfortably even by women, and its aesthetics enable it to fit in anywhere with style.
- Thanks to its 360° reading capability, inventory time can be drastically cut.



In distribution/manufacturing fields

- Round-the-clock use of the model, which is compliant with IEEE 802.11 b/g/n, is possible while it is operated online.
- The model's robust durability ensures accurate use in tough work environments with peace of mind.



DENSO WAVE Quality

Why are DENSO WAVE's products chosen over others?

Rich experience	Pioneering company, established in 1978, in the automatic recognition field whose products boast the No. 1 spot for the number of units in use.	Reliable, integrated production system	DENSO WAVE is engaged in every aspect of a product, its development, production, marketing and maintenance.
Long-term support	Even after sales end, 5-year support is guaranteed.	Superior engineering prowess	DENSO WAVE is the company that developed QR Code, used all over the world.

DENSO

BHT-1300 SERIES

BHT-1300 series specification

Type	2D code model				Barcode model			
	BHT-1361Q-CE	BHT-1361QWB-CE	BHT-1306Q	BHT-1306QWB	BHT-1361B-CE	BHT-1361BWB-CE	BHT-1306B	BHT-1306BWB
OS	Windows Embedded Compact 7				BHT-OS			
CPU	ARM Cortex-A8 800 MHz				32-bit RISC microprocessor			
Memory	Flash ROM <sup>1</sup> 2.0 GB (1.2 GB for user area)				32-bit RISC microprocessor 64 MB (45 MB for user area)			
Display	2.4 inch QVGA (240x320 dots)				Liquid crystal dot matrix display (color)			
Display device	Can be set as required in the application.				15 (2-byte characters) x 20 rows, 30 (1-byte characters) x 20 rows			
Displayable characters <sup>2</sup>	Can be set as required in the application.				15 (2-byte characters) x 20 rows, 30 (1-byte characters) x 20 rows			
Back light	Can be set as required in the application.				White LED			
Scanner	Area sensor				Advanced scan plus (CCD)			
Decode	2D code				QR code, micro QR code, SQRC iQR, PDF417, micro PDF417, Maxi code, DataMatrix (ECC200), GS1 DataBar Composite (EAN.UCC Composite)			
Barcode	Barcode				EAN-13/-8 (JAN-13/-8), UPC-A/-E, UPC/EAN (Add-on embedded), Interleaved 2 of 5 (ITF), Standard 2 of 5 (STF), CODABAR (NW-7), CODE39, CODE93, CODE128, GS1-128 (EAN-128), GS1 DataBar(RSS)			
Minimum resolution	2D code				0.167 mm			
Barcode	Barcode				0.125 mm			
Reading reference position	100 mm				50 mm			
Maker	Area guide maker				-			
Scan Confirmation	LED in two colors: Blue/red, speaker, vibrator				LED in three colors: Blue/red/green, speaker, vibrator			
Key input section	Number of keys				21 keys (including power key) + cross cursor key + 3 trigger keys <sup>3</sup>			
Communicator	Optical I/F				Communication mode			
Transmission speed	-				Infrared ray (IrDA Ver. 1.2)[low power/physical signaling layer-compliant]			
Communication distance	-				Up to 115.2 kbps, 460.8 kbps			
Wireless LAN	Suitable standard				IEEE 802.11b/g/n compliant			
Frequency	-				2.4 GHz band			
Communication distance <sup>4</sup>	-				Approx. 75 m indoors, approx. 200 m outdoors			
Transmission speed <sup>5</sup>	-				IEEE802.11g/54/48/36/24/18/12/9Mbps, IEEE802.11n/65/58.5/52/39/26/19.5/13.6/5Mbps			
Access method	-				Infrastructure mode, ad-hoc mode			
Security	WEP40, 128 WPA-PSK(TKIP/AES), WPA2-PSK(TKIP/AES), WPA-1x(TKIP/AES/EAP-TLS, PEAP/LEAP/EAP-FAST), WPA-2x(TKIP/AES/EAP-TLS, PEAP/LEAP/EAP-FAST), 802.1x(WEP/EAP-TLS, PEAP/LEAP/EAP-FAST)				WEP40/128, WPA-PSK(TKIP/AES), WPA-1x(TKIP/AES/EAP-TLS, PEAP/LEAP/EAP-FAST), WPA-2x(TKIP/AES/EAP-TLS, PEAP/LEAP/EAP-FAST), 802.1x(WEP/EAP-TLS, PEAP/LEAP/EAP-FAST)			
Bluetooth	-				Bluetooth Ver. 2.1 + EDR based class 2			
Cable I/F	-				USB Ver. 2.0 (USB microB)			
Card slot	-				MicroSD or MicroSDHC (up to 32 GB)x1(FAT32 compliant)			
Additional functionality	Clock, speaker, vibrator, battery and voltage indicators, keypad backlight				Clock, speaker, vibrator, battery and voltage indicators, keypad backlight, remote wakeup			
Environmental performance	Operating temperature				-20 to 50°C <sup>6</sup>			
Security level	-				IP54			
Drop resistance <sup>7</sup>	-				10 times of dropping tests from 2.0/1.2 m height over a concrete floor with each of 6 sides of the enclosure facing down (60 times total)			
Mass	Approx. 193 g (with thin battery mounted), approx. 211 g (with standard battery mounted)				Approx. 188 g (with thin battery mounted), approx. 206 g (with standard battery mounted)			

<sup>1</sup> Memory (about 400 KB) for font file area included in the user area. <sup>2</sup> Although the effective number of picture elements is more than 99.99% thanks to high-precision technologies used to manufacture LCDs, allow the possibility of some elements, less than 0.01% that are missing or permanently turned on. <sup>3</sup> For BHT-OS model, the standard font, the small font, the 30-dot font and the 40-dot font can be set in addition to the 16-dot font and the 24-dot font. <sup>4</sup> Windows-OS model and BHT-OS model differ in key layout and allocation. <sup>5</sup> The listed figures for communication distance and speed are theoretically possible figures and may vary depending on the work environment where the unit is used. <sup>6</sup> Zero to 40°C when batteries are being recharged. <sup>7</sup> Result obtained in a test under regular temperature is shown and not meant as a guarantee.

Power supply specifications

Type	2D code model				Barcode model			
	BHT-1361Q-CE	BHT-1361QWB-CE	BHT-1306Q	BHT-1306QWB	BHT-1361B-CE	BHT-1361BWB-CE	BHT-1306B	BHT-1306BWB
Power	Lithium-ion battery				Lithium-ion battery or 3 AAA alkaline batteries (separately sold battery adapter required)			
Main battery	Lithium-ion battery				Lithium-ion battery			
Operating time <sup>8</sup>	Standard battery	29 hours <sup>9</sup>	29 hours <sup>10</sup> /27 hours <sup>11</sup>	95 hours <sup>9</sup>	95 hours <sup>10</sup> /40 hours <sup>11</sup>	30 hours <sup>9</sup>	30 hours <sup>10</sup> /28 hours <sup>11</sup>	98 hours <sup>9</sup>
Thin battery	16 hours <sup>9</sup>	16 hours <sup>10</sup> /14 hours <sup>11</sup>	55 hours <sup>9</sup>	55 hours <sup>10</sup> /21 hours <sup>11</sup>	17 hours <sup>9</sup>	17 hours <sup>10</sup> /15 hours <sup>11</sup>	57 hours <sup>9</sup>	57 hours <sup>10</sup> /23 hours <sup>11</sup>
AAA alkaline batteries	-				45 hours <sup>9</sup>	45 hours <sup>10</sup> /17 hours <sup>11</sup>	55 hours <sup>9</sup>	

<sup>8</sup> The described operating time is a reference figure under regular temperatures and may vary depending on usage conditions. <sup>9</sup> With one reading pass over a 5s period and backlight level 1. <sup>10</sup> When ratios of reading, wireless communication, rewriting of screen and holding durations are 1:1:1:20 under continued wireless operation and backlight level 1. <sup>11</sup> When ratios of reading, wireless communication, rewriting of screen and holding durations are 1:1:1:20. The wireless function is enabled only when the terminal is connected to the wireless network; the wireless function is disabled otherwise. The backlight level is 1.

CDG | Computer Peripheral and Supplies Ltd.  
 Computer Peripheral and Supplies Ltd.  
 244 Soi Pattanakarn 53, Pattanakarn, Suanluang, Bangkok 10250 Thailand

Contact Us  
 Tel : (66) 0-2322-9535, 0-2722-4040  
 Fax : (66) 0-2322-7990  
 E-Mail : sales.dept@cps.co.th  
 Web site : www.cps.co.th, www.facebook.com/cps.co.th

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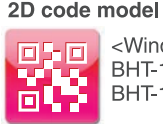


DENSO

HANDY TERMINAL

NEW

BHT-1300 SERIES



2D code model  
 <Windows-OS model> BHT-1361Q-CE  
 <BHT-OS model> BHT-1306Q  
 BHT-1361QWB-CE BHT-1306QWB



Barcode model  
 <Windows-OS model> BHT-1361B-CE  
 <BHT-OS model> BHT-1306B  
 BHT-1361BWB-CE BHT-1306BWB



Ultimate usability realized in these models

Windows-OS model released!!  
 OS can be selected according to use  
 • Windows-OS / • BHT-OS

Amazing 360° reading capability\*

\*2D code model



3 years  
 Only for customers registered as a user with DENSO WAVE:  
**3-year warranty**  
 \* See inside pages for details.



# OS can be selected from “Windows-OS” and “BHT-OS”!

# Universal handy terminal launched!

**NEW**

Windows-OS model released, as user-friendly as ever

Windows-OS



\* Screen showing simulated images

## User friendly!

**28h** Long operation possible even when the unit is kept online

• Proprietary power-saving design allowing a 28-hour\* consecutive operation, the longest in its class.  
\*When ratios of reading, wireless communication, rewriting of screen, and holding durations are 1:1:1:20 in continuous wireless operation; when a standard battery is mounted in barcode models.



**Intuitive operation with touch panel**

• A convenient touch panel allows intuitive operation.



**High-performance hardware enables comfortable operation.**

• High-speed CPU and large-capacity memory enable fast and efficient processing.

## Equipment that can be managed with peace of mind!

**Windows OS** Based on Windows Embedded Compact 7

• Easy to use around the world, with a versatile OS.

**Remote desktop/web browser** reduces development man-hours.

• Newly incorporated “remote desktop plug-in” and “web browser plug-in” enable thin client implementation with lower development costs.



**Quick wireless cloning\***

• Copies of another terminal can be made quickly.  
• Each terminal can be set up wirelessly without using a PC.

\*Bluetooth + wireless LAN model only.



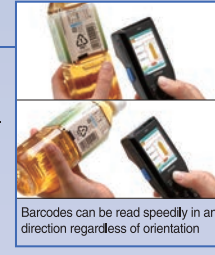
**Compact, but easy to use**

• Each model's body is more than 15% thinner, lighter and smaller\*  
• Design was sought for functional beauty that also allows comfortable operation despite size constraints.  
• Dome-shaped keys are used, which can be operated easily by workers wearing work gloves.  
\*Compared to Denso Wave's BHT-800Q when a thin battery is mounted in respective 2D code models.



**360°** Capability to read codes from any angle of 360° makes for quick reading.\*

• Smooth 360° reading is realized using the latest algorithms.  
• Compared to barcode models, working time with the model can be reduced up to 30%.  
\*With only 2D code model



**Distinctive displays even in bright sunlight**

• A high-visibility LCD, High-Bright Display, is used.  
• A wide viewing angle, and therefore, enhanced visibility from oblique angles is realized.



**Solid and robust to protect both hardware and data**

• Built-in toughness that endures droppings from 2 m height and operates in minus 20° to 50°C temperature range.  
• For Windows-OS model, data on terminals can be backed up with BHT Backup.  
• For BHT-OS model, its transaction function automatically restores the immediately previous conditions in the case where the battery is disconnected and a file error occurs.



**Comprehensive support system available anywhere in the world.**

• The model can be used in more than 40 countries worldwide.  
• Supports multi-language display.  
For Windows-OS, fonts for more than 40 countries are supported.  
For BHT-OS model, Japanese, English, Chinese, Korean and Thai fonts are supported.



**3-year warranty allows customer's long use with peace of mind.**

• Customers who register on Denso Wave's website are offered a 3-year warranty.  
\*1-year warranty for consumables as defined by DENSO WAVE.



**42h** Unique power-saving design enables extended operation time.

• Operation time longer than Windows-OS model.  
• Unique power-saving design enables best-in-class long-time operation of 42 hours\* even when continuously connected by wireless.  
\*Ratio of scanning: wireless communication: screen update: standby = 1:1:1:20 under continuous wireless WAN connection. For barcode model with a standard battery.



**Ready for use with simple business application software.**

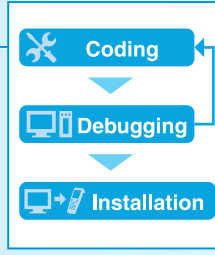
• A simple business application software (Easy Pack Ad) allowing collection of actual records for inventory and inspection plus 1:1/1:n collation is included as standard equipment.  
• No other devices are required for data transmission.

**Easy-to-use battery-powered terminal\***

• Even in the case of sudden loss of battery power, commercially-available dry-cell batteries can be used.  
\*A dry-cell adapter is separately required.

**BHT OS** Equipped with BHT-BASIC.

• Equipped with a development tool to help develop all kinds of applications. Coding, debugging and installation can be efficiently controlled.  
• Highly compatible, unique OS enables effective use of application assets.



**Solid middleware suited to customers' uses.**

• Various software applications are prepared in cooperation with partner companies across Japan. We introduce software applications best suited to the industry and implementation for each customer.

**Easy cloning with IrDA.**

• Copies of another terminal can be made easily.  
• BHT-OS model is as user-friendly as previous models, yet enables cloning with IrDA.

Compact model with ultimate usability

BHT-OS



\* Screen showing simulated images

## BHT-1300 SERIES

Dimensions	Unit: mm (for reference only)	Components
 2D code model with thin battery mounted	52.5	<Windows-OS model> <ul style="list-style-type: none"> <li>● Hand strap with stylus</li> <li>● Guidelines for operation</li> <li>* Battery and battery cover are not supplied with the product</li> <li>☒ Instruction manual</li> </ul> <BHT-OS model> <ul style="list-style-type: none"> <li>● Hand strap</li> <li>● Guidelines for operation</li> <li>* Battery and battery cover are not supplied with the product</li> <li>☒ Instruction manual</li> </ul>
 Barcode model with standard battery mounted	38.5	
 Barcode model with thin battery mounted	36	

Software
<Windows-OS model> <ul style="list-style-type: none"> <li>● Development tools                             <ul style="list-style-type: none"> <li>• Windows Embedded Compact 7-based Software Development Kit for BHT* (SDK) ☒</li> <li>* This application software can be downloaded from our dedicated customer site only by customers who purchased Windows-based BHT.</li> </ul> </li> <li>● Preinstalled software                             <ul style="list-style-type: none"> <li>• Keyboard interface application software [kbiICE]</li> <li>• Launcher [Application Launcher]</li> <li>• Wireless setting tool [WLAN Manager]</li> <li>• Back-up tool [BHT Backup]</li> </ul> </li> </ul> <BHT-OS model> <ul style="list-style-type: none"> <li>● Development tools                             <ul style="list-style-type: none"> <li>• BHT-BASIC4.0 Development Pack</li> <li>• Easy Pack Ad for BHT-1300</li> <li>• BHT-BASIC4.0 Compiler</li> <li>• BHT Browser</li> <li>• BHT-BASIC4.0 Remote Debugger</li> <li>• BHT-BASIC4.0 Transfer Utility</li> <li>• BHT-C software development kit ☒</li> </ul> </li> <li>● Preinstalled software                             <ul style="list-style-type: none"> <li>• Easy Pack Ad for BHT-1300 ☒</li> <li>• HTML browser</li> <li>• BHT Browser</li> <li>• Setup software</li> <li>• BHT Setting ☒</li> </ul> </li> <li>● Online system emulator</li> <li>• BHT Term Emulator</li> </ul> ☒ Items with this mark are available from the company's homepage (QBdirect) free of charge

Option (sold separately)
<Windows-OS model> <ul style="list-style-type: none"> <li>● Holder, which performs data communication with BHT communication unit and the up-level device</li> <li>• CU-1301A (RS-232C communications + recharging)</li> <li>• CU-1311A (Ethernet communications + recharging)</li> <li>• CU-1321 (USB communications + recharging) ☒</li> </ul>

	CU-1301A	CU-1311A	CU-1321
Between BHT and host	RS-232C	Ethernet (10BASE-T)	USB2.0
Communication mode			Full speed mode-compatible
Charging unit	Battery	Approx. 3.5 hrs for standard battery/ Approx. 2.5 hrs for thin battery	Approx. 10 hrs for standard battery/ Approx. 6 hrs for thin battery*
Size(mm)	109(D)×95(W)×111(H)		
Working voltage	AC adapter**		Supplied from USB port/AC adapter**
*1 Changes depending on the power supplying capacity of connected device: approx. 3.5 hrs for standard battery and approx. 2.5 hrs for thin battery when AC adapter is connected. *2 The AC adapter is optional.			
● Batteries/battery adapters <ul style="list-style-type: none"> <li>• BT-130LA-CE-C (thin battery + battery cover) ☒</li> <li>• BT-130L-C (standard batteries + battery cover) ☒</li> <li>• BT-130L-CE-C (standard batteries + battery cover) ☒</li> <li>• BT-130LA (thin battery only) ☒</li> <li>• BT-20LB (standard batteries only) ☒</li> <li>• BT-20LB (standard batteries only) ☒</li> <li>• B-130D (adapter for drycell) ☒</li> </ul> ● Soft case and others <ul style="list-style-type: none"> <li>• SCBHT-1300 (soft case) ☒</li> <li>• WHBHT-1300 (waist case) ☒</li> <li>• EA-13B (touch scan attachment for barcode models) ☒</li> <li>• NSBHT-1300 (Neck strap) ☒</li> </ul> ● Communication cable <ul style="list-style-type: none"> <li>• CBBHT-US2000/C13-4A-CE ☒</li> <li>* The BHT-1300 can be charged by connecting it to a USB charger or other power adapter, or a PC USB port. When charging the BHT-1300, use a device that satisfies the following output and USB charging specifications. Output specifications: (Voltage) DC5.0±25V(current) 1.2A or higher Battery Charging Specification Rev. 1.2</li> </ul>			

	CU-1301	CU-1311	CU-1321
Between BHT and host	RS-232C	Ethernet (10BASE-T)	USB2.0
Communication mode			Full speed mode-compatible
Charging unit	Battery	Approx. 3 hrs for standard battery/ Approx. 2 hrs for thin battery	Approx. 7 hrs for standard battery/ Approx. 4 hrs for thin battery*
Size(mm)	109(D)×95(W)×111(H)		
Working voltage	AC adapter**		Supplied from USB port/AC adapter**
*1 Changes depending on the power supplying capacity of connected device: approx. 3 hrs for standard battery and approx. 2 hrs for thin battery when AC adapter is connected. *2 The AC adapter is optional.			
● Batteries/battery adapters <ul style="list-style-type: none"> <li>• BT-130LA-C (thin battery + battery cover) ☒</li> <li>• BT-130L-C (standard batteries + battery cover) ☒</li> <li>• BT-130LA (thin battery only) ☒</li> <li>• BT-20LB (standard batteries only) ☒</li> <li>• B-130D (adapter for drycell) ☒</li> </ul> ● Soft case and others <ul style="list-style-type: none"> <li>• SCBHT-1300 (soft case) ☒</li> <li>• WHBHT-1300 (waist case) ☒</li> <li>• EA-13B (touch scan attachment for barcode models) ☒</li> <li>• NSBHT-1300 (Neck strap) ☒</li> </ul> ● Communication cable <ul style="list-style-type: none"> <li>• CBBHT-US2000/C13-4A ☒</li> <li>* The BHT-1300 can be charged by connecting it to a USB charger or other power adapter, or a PC USB port. When charging the BHT-1300, use a device that satisfies the following output and USB charging specifications. Output specifications: (Voltage) DC5.0±25V(current) 1.0A or higher USB charging specifications: Battery Charging Specification Rev. 1.2</li> </ul>			

☒ Peripheral devices bearing this mark can be used for both Windows OS and BHT-OS models.