



Handheld Terminal

BT-A500 Series

Instruction Manual

Be sure to read this instruction manual carefully prior to operating this product. After reading, keep this manual in a safe place so that you can refer to it at any time.

In this instruction manual, BT-A500 Series means the BT-A500/A500G/A500GC/A500GM/A500GA/A500GE.

Symbols

The following symbols alert you to important messages. Be sure to read these messages carefully.

	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Indicates a situation which, if not avoided, could result in product damage as well as property damage.

Indicates cautions and limitations that must be followed during operation.

Indicates additional information on proper operation.

Indicates tips for better understanding or useful information.

- IEEE802.11a/b/g/n/ac: Wireless LAN standards established by 802 committee which has designed standards of LAN technology in IEEE (Institute of Electrical and Electronics Engineers).
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Home → [Settings] → [System] → [About phone] → [Legal information]

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Safety Precautions on Laser Product

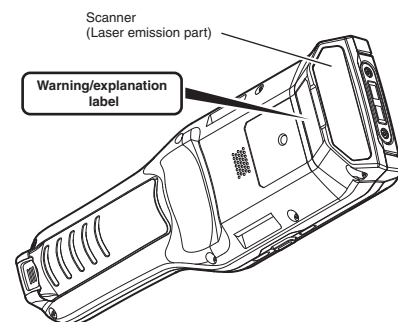
The BT-A500 Series uses a visible semiconductor laser as a light source. Follow the instructions mentioned in this manual. Otherwise, injury to the human body (eyes and skin) may result.

	Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not disassemble this product. Laser emission from this product is not automatically stopped when it is disassembled.
	Class 2 Laser Product - Do not stare into the direct or specularly reflected beam. - Do not direct the beam at other people or into areas where other people unconnected with the laser work might be present. - Be careful of the path of the laser beam. If there is a possibility that the operator may be exposed to the specular or diffuse reflections, block the beam by installing a protective enclosure. - Install this product so that the path of the laser beam is not as the same height as that of human eye. - BT-A500GA only Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

The BT-A500 Series is classified as below in accordance with IEC60825-1.

Item	BT-A500/A500G/A500GC/A500GM/A500GE	BT-A500GA
Wavelength	658 nm	658 nm
Output	1.0 mW	1.0 mW
Laser class	Class 2 laser product (IEC 60825-1)	Class 2 laser product (IEC60825-1, FDA(CDRH) Part 1040.10*) * The laser classification for FDA(CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice No.56.

Locations of warning/explanation labels



Warning/explanation label

BT-A500/A500G



BT-A500GC



BT-A500GM/A500GE



BT-A500GA



Safety Precautions on LED Product

The degree of risk of this product is shown below.

Risk group 2

- * LED product is classified as shown below according to IEC 62471.

Exempt Group	Does not pose any photobiological hazard
Risk Group 1 (Low-Risk)	Does not pose a hazard due to normal behavioral limitations on exposure.
Risk Group 2 (Moderate-Risk)	Does not pose a hazard due to the aversion response to very bright light sources or due to thermal discomfort.
Risk Group 3 (High-Risk)	May pose a hazard even for momentary or brief exposure.

Follow the instructions mentioned in this manual. Otherwise, injury to the human body (eyes and skin) may result.

	Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes.
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Safety Precautions

General cautions

⚠ DANGER	- Do not use this product for the purpose of protecting a human body or a part of human body. - This product is not intended for use as an explosion-proof product. Do not use this product in a hazardous location and/or potentially explosive atmosphere. - Do not use this product in an application that may cause death, serious injury or serious property damage due to a failure with this product should occur, such as nuclear power plants, on aircraft, trains, ships, or vehicles, used within medical equipment, playground equipment, roller coasters and other rides, etc.
⚠ WARNING	If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
⚠ CAUTION	- Be sure to check that this product performs properly before starting the work or operation. - If this product malfunctions, take adequate safety precautions to prevent various types of damage. - Do not use this product in a manner not specified herein. It may result in fire, electric shock or malfunction.
NOTICE	- Do not modify this product or use it in any way other than described in the specifications. Otherwise, the functions and performance cannot be guaranteed. - The LCD panel may generate microscopic spots (black/bright spot), uneven brightness or crosstalk (phenomenon that non-existent lines or patterns are displayed), depending on the conditions. - If the same display remains on the screen for a long time, afterimage may occur due to the characteristics of LCD.

Handling of BT-A500 Series

NOTICE	- Use or store this product within the temperature range described in "Specifications" (5 page). Do not leave the product inside a closed car or at a place exposed to direct sunlight. Doing so may damage the unit or change its reading performance. - Use within the humidity range described in "Specifications" (5 page). Do not use the product at locations where condensation occurs due to the rapid temperature change. Doing so may damage the unit or change its reading performance. - This is a precision instrument. Dropping this product or subjecting it to shock may cause damage. Be careful when carrying or using this unit. - Do not place the BT-A500 Series in a location with high humidity or a dusty area. Doing so may damage the unit or change its reading performance. - Please select a model that matches the country in which it will be used. - For details, contact your nearest KEYENCE sales professional.
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Handling of BT-A500 Series main units

NOTICE	Do not insert a sharp object such as a needle into the buzzer hole on the back side of the BT-A500 Series. The tarpaulin may be damaged.
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Precautions when using the rechargeable battery pack (BT-B5)

⚠ WARNING	Using batteries other than BT-B5 may cause fire or explosion. Be sure to use the specified battery.
NOTICE	- Never use the rechargeable battery pack with devices other than those specified. If used with devices of which using conditions are different, the rechargeable battery pack may deteriorate earlier than expected or the devices may be damaged. - Use an AC power supply cord that coincides the shape of plug used in each country. Also, check that the cord is compliant with regulations and standards in each country.

Recycling the battery

Disposal methods of lithium ion battery differ among countries and regions. Follow the instructions in your area.

When disposing of lithium ion batteries, remaining capacity may cause heat generation, explosion or fire due to contact with other metals. Be sure to cover the positive and negative terminals with adhesive insulation tape.

Precautions on regulations and Standards

Precautions on wireless LAN

⚠ WARNING	Remove the main battery of the BT-A500 Series near locations where using wireless devices is banned at medical institutions or near electric devices for medical purposes. Carry and use the product away from an implanted cardiac pacemaker.
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Important

- The BT-A500/A500G/A500GC/A500GM/A500GA/A500GE uses the radio waves of the 5 GHz band.
The BT-A500/A500G can use the 5.2 GHz band (W52: 36, 40, 44, 48 ch), 5.3 GHz band (W53: 52, 56, 60, 64 ch), and 5.6 GHz band (W56: 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 ch).
The BT-A500GC can use the 5.2 GHz band (W52: 36, 40, 44, 48 ch), 5.3 GHz band (W53: 52, 56, 60, 64 ch), and 5.8 GHz band (W58: 149, 153, 157, 161, 165ch).
The BT-A500GM can use the 5.2 GHz band (W52: 36, 40, 44, 48 ch), 5.3 GHz band (W53: 52, 56, 60, 64 ch), 5.6 GHz band (W56: 100, 104, 108, 112, 116, 120, 124, 128 ch) and 5.8 GHz (W58: 149, 153, 157, 161, 165ch).
The BT-A500GA can use the 5.2 GHz band (W52: 36, 40, 44, 48 ch), 5.3 GHz band (W53: 52, 56, 60, 64 ch), 5.6 GHz band (W56: 100, 104, 108, 112, 116, 132, 136, 140 ch) and 5.8 GHz (W58: 149, 153, 157, 161, 165ch).
The BT-A500GE can use the 5.2 GHz band (W52: 36, 40, 44, 48 ch), 5.3 GHz band (W53: 52, 56, 60, 64 ch), 5.6 GHz band (W56: 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 ch) and 5.8 GHz (W58: 149, 153, 157, 161, 165ch).
Using 5.2 GHz band (W52) and 5.3 GHz band (W53) outdoors is prohibited by RadioAct.
- Depending on the environment, communication may be impossible. Check the communication availability before using.
- If this product is used near devices with the same frequency band, such as a wireless LAN device, microwave oven, heating equipment for industrial use, high-frequency equipment for medical use, etc., radio wave interference may occur and the communication speed will become slow or communication may become impossible.
- If a wireless LAN and Bluetooth are used at the same time, radio wave interference may occur and the communication speed will become slow or communication may be interrupted. If there is communication failure, stop using either the wireless LAN or Bluetooth.
- Communication may be impossible at locations near metallic objects, locations surrounded with metallic walls or where there is a lot of metallic powder.
- With the frequency band for this unit, premise radio stations (license required), specified low power radio stations (license not required) and amateur radio stations (license required) for identifying mobile objects used for industrial, scientific and medical equipment or factory production lines are operating.
 - Before using this unit, be sure to check that premise radio stations, specified low power radio stations and amateur radio stations for identifying mobile objects are not operating in the vicinity.
 - If radio wave interference occurs from the this unit against premise radio stations for identifying mobile objects, change the usable frequency immediately or stop the electric wave generation, and then contact the below phone number in regard to taking necessary measures (e.g. setting a partition) to avoid interference.

[Thai] BT-A500/A500G only

This telecommunication equipment is in compliance with NBTC requirements.

[Singapore] A500/A500G/A500GM only

This telecommunication equipment is in compliance with the regulation requirement for Singapore.

Complies with
IMDA Standards
DA104049

■ Precautions on Bluetooth



Remove the main battery of the BT-A500 Series near locations where using wireless devices is banned at medical institutions or near electric devices for medical purposes. Carry and use the product away from an implanted cardiac pacemaker.



- Depending on the environment, communication may be impossible. Before starting actual operation, be sure to test the operation.
- If this product is used near devices with the same frequency band, such as a wireless LAN device, microwave oven, heating equipment for industrial use, high-frequency equipment for medical use, etc., radio wave interference may occur and the communication speed will become slow or communication may become impossible.
- If a wireless LAN and Bluetooth are used at the same time, radio wave interference may occur and the communication speed will become slow or communication may be interrupted. If there is communication failure, stop using either the wireless LAN or Bluetooth.
- Communication may be impossible at locations near metallic objects, locations surrounded with metallic walls or where there is a lot of metallic powder.
- Possible communication distance is approx. 10 m of vision, however, even within 10 m, communication may become impossible depending on the environment. Check the communication availability before using.
- With the frequency band for this unit, premise radio stations (license required), specified low power radio stations (license not required) and amateur radio stations (license required) for identifying mobile objects used for industrial, scientific and medical equipment or factory production lines are operating.
 - Before using this unit, be sure to check that premise radio stations, specified low power radio stations and amateur radio stations for identifying mobile objects are not operating in the vicinity.
 - If radio wave interference occurs from the this unit against premise radio stations for identifying mobile objects, change the usable frequency immediately or stop the electric wave generation, and then contact the below phone number in regard to taking necessary measures (e.g. setting a partition) to avoid interference.

[Thai] BT-A500/A500G only

This telecommunication equipment is in compliance with NBTC requirements.

[Singapore] BT-A500/A500G/A500GM only

This telecommunication equipment is in compliance with the regulation requirement for Singapore.

Complies with

IMDA Standards

DA104049



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/her own expense.

FCC CAUTION

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

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

■ ISED Regulations BT-A500GA only

- The BT-A500GA complies with the following regulations specified by the ISED.
- Applicable regulation
ICES-003
RSS-247
 - The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. The BT-A500GA has been tested and found to comply with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules.
 - 5150-5350 MHz band is restricted to indoor operation only.
High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.
 - Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.
 - Les connaissances scientifiques dont nous disposons n'ont mis en évidence aucun problème de santé associé à l'usage des appareils sans fil à faible puissance. Nous ne sommes cependant pas en mesure de prouver que ces appareils sans fil à faible puissance sont entièrement sans danger. Les appareils sans fil à faible puissance émettent une énergie radioélectrique (RF) très faible dans le spectre des micro-ondes lorsqu'ils sont utilisés. Alors qu'une dose élevée de RF peut avoir des effets sur la santé (en chauffant les tissus), l'exposition à de faibles RF qui ne produisent pas de chaleur n'a pas de mauvais effets connus sur la santé. De nombreuses études ont été menées sur les expositions aux RF faibles et n'ont découvert aucun effet biologique. Certaines études ont suggéré qu'il pouvait y avoir certains effets biologiques, mais ces résultats n'ont pas été confirmés par des recherches supplémentaires. Le BT-A500GA a été testé et jugé conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC.
 - La bande 5150-5350 MHz est restreinte à une utilisation à l'intérieur seulement. Les radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz, et ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.
 - La transmission des données est toujours initiée par le logiciel, puis les données sont transmises par l'intermédiaire du MAC, par la bande de base numérique et analogique et, enfin, à la puce RF. Plusieurs paquets spéciaux sont initiés par le MAC. Ce sont les seuls moyens pour qu'une partie de la bande de base numérique active l'émetteur RF, puis désactive celui-ci à la fin du paquet. En conséquence, l'émetteur reste uniquement activé lors de la transmission d'un des paquets susmentionnés. En d'autres termes, ce dispositif interrompt automatiquement toute transmission en cas d'absence d'information à transmettre ou de défaillance.

■ FCC Regulations BT-A500GA only

- 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 interface, and (2) this device must accept any interference received, including interference that may cause undesired operation.
 - Application regulation
FCC Part 15 Subpart B Class A
FCC Part 15 Subpart C
FCC Part 15 Subpart E
 - The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. The BT-A500GA has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.
 - Compliance with FCC requirement
Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.
 - 5.15-5.35GHz band is restricted to indoor operations only.
 - Frequency Tolerance: ±25ppm
- Regulatory information page is located at: [settings] : [About phone] : [Regulatory]



- This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.**
- Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.**

■ **UL certification BT-A500GA only**

- The BT-A500GA complies with the following UL/CSA standards and has obtained the UL/ C-UL certifications.
- Applicable standards UL 62368-1
 CAN/CSA-C22.2 No. 62368-1
 - UL File No. E167973
 - UL category AZOT/AZOT7



RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

■ **Mexico (Méjico) BT-A500GA only**

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.



■ **CE Marking BT-A500GE only**

KEYENCE Corporation has confirmed that this product complies with the essential requirements of the applicable EU Directive(s), based on the following specifications. Be sure to consider the following specifications when using this product in the Member States of European Union.

- RE Directive
- RoHS Directive

The full text of the EU declaration of conformity is available at the following internet address: <http://www.keyence.com/cedoc>

- Frequency band of operation: Maximum radio-frequency power
2400 ~ 2483.5 MHz: 19.54 dBm (89.85 mW)
5180 ~ 5320 MHz: 22.98 dBm (198.61 mW)

These specifications do not give any guarantee that the end-product with this product incorporated complies with the essential requirements of RE and Machinery Directive. The manufacturer of the end-product is solely responsible for the compliance on the end-product itself according to these Directives.

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

AT	BE	BG	HR	CY	CZ	DK
EE	FI	FR	DE	EL	HU	IE
IT	LV	LT	LU	MT	NL	PL
PT	RO	SK	SI	ES	SE	UK
IS	LI	NO	CH	TR		

Explanation of symbols

■ **DC Mark**



This symbol indicates a direct current.

■ **WEEE**



This symbol indicates a separate collection for WEEE.

■ **Stand-by Mark**



This symbol indicates a stand-by condition.

Precautions for proper use

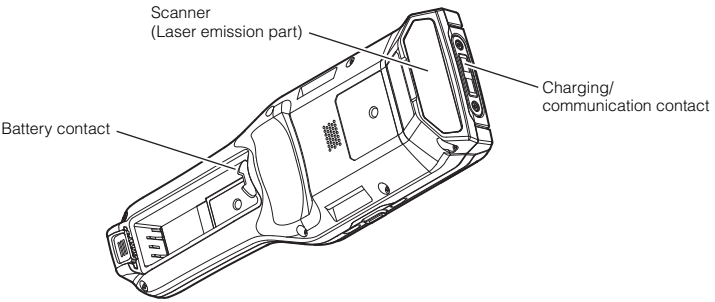
■ **Handling of packing**

NOTICE

- The BT-A500 Series has an enclosure rating of IP65, however, if the "battery attachment cover" is not properly attached, these enclosure ratings cannot be guaranteed. When using in environments where water or dust is present, check if these are properly attached.
- Dropping the BT-A500 Series or subjecting it to extreme shock may lead to the loss of water-proofing.

Cleaning

Clean the following parts with air blow periodically.
If removing dirt is difficult, use a cotton swab to clean the contacts directly. (Use absolute ethanol if dirt is stuck on them.)
Remove the battery attachment cover before cleaning the battery contact.



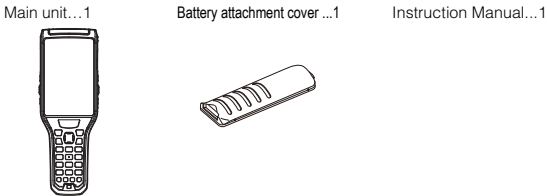
NOTICE

- If dirt or dust is attached, contact failure may occur on the battery/charging/communication contacts. This may cause charging function to deteriorate and instantaneous interruption. Make sure that waste textile is not attached to the battery/charging/communication contacts when cleaning.

Checking the Package

When opening the package, check the following items are all included.
If there is something missing, product failure or damage, contact your nearest KEYENCE sales office.

■ **BT-A500/A500G/A500GC/A500GM/A500GA/A500GE**



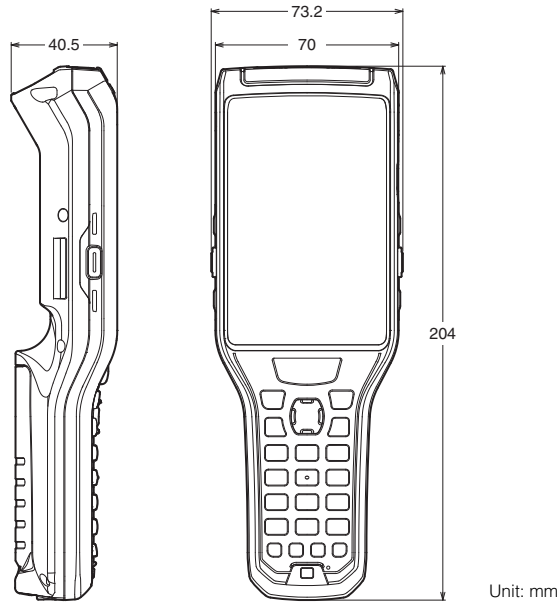
Specifications

Item				Specifications
Model				BT-A500/A500G/A500GC/A500GM/A500GA/A500GE
Controller	CPU		Qualcomm Octa-core	
	OS		Android™ 10	
Main memory	RAM		2 GB	
	ROM		16GB	
Display	LCD	Display method	3.5-inch TFT color LCD	
		Resolution (number of dots)	320 (H) x 480 (V)	
	Operation confirmation LED		3-color LED (red, green, blue, yellow, cyan, magenta, white)	
Operations	Hard keys	Type	Set of arrow keys x 1 (4 directions), trigger keys x 3 (center x 1, side x 2), customized keys x 2 (P1 key, P2 key), function change keys x 4 (white key, orange key, blue key, SFT key), data input keys x 14 (0 to 9 keys, ENT key, clear key, symbol key, minus key), power key x 1	
	Touch panel		Electrostatic capacitance method (Dragontrail tempered glass)	
Scanner	Optical characteristic	Reading light source	High-intensity white LED	
		Pointer light source	Visible light semiconductor laser (658 nm) Output 1.0 mW Class 2 laser product (IEC 60825-1)	
		Minimum resolution	2D code: 0.191mm Barcode: 0.127mm	
		Reading distance	80-1550mm (CODE39 narrow bar width 0.254mm) 25-4100mm (CODE39 narrow bar width 0.508mm) 100-370mm (QR cell size 0.254mm) 0-1200mm (QR cell size 0.508mm)*2	
		Reading width/Field range	151x94mm (Reading distance 300mm 1ft)*2	
	Supported codes		JAN/EAN/UPC (add-on code supported), CODE128, GS1-128, CODE39, NW-7, CODE93, ITF COOP2of5, Industrial 2of5 QR code, Micro QR, DataMatrix (ECC200), PDF417, GS1 DataBar, composite symbol, Postal	
Wireless communication	Wireless LAN	Wireless standards	IEEE802.11a/b/g/n/ac	
		Radio frequency	BT-A500/A500G: 2.4GHz (b, g, n:1 to 13ch) 5.2GHz, 5.3GHz, 5.6GHz (a/n/ac) BT-A500GC: 2.4GHz (b, g, n:1 to 13ch) 5.2GHz, 5.3GHz, 5.8GHz (a/n/ac) BT-A500GM/A500GE: 2.4GHz (b, g, n:1 to 13ch) 5.2GHz, 5.3GHz, 5.6GHz, 5.8GHz (a/n/ac) BT-A500GA: 2.4GHz (b, g, n: 1 to 11ch) 5.2GHz, 5.3GHz, 5.6GHz, 5.8GHz (a/n/ac) * W52/W53 can only be used indoors.	
		Security method	Security: OPEN / WEP(64/128 bit)/ WPA/WPA2/ WPA3 WPA encryption: TKIP/ AES Authentication: PSK/ PEAP/ EAP-TLS/ EAP-TTLS/ EAP-PWD	
	Bluetooth®	Wireless standards	Bluetooth® V5.0 + BR/EDR/LE	
		Supported profiles	A2DP, AVRCP, HID, IOPT, OPP, PAN, SPP	
		Communication distance	Approx. 10 m	

Item			Specifications
Power supply	Main battery	Type	Dedicated lithium ion battery pack
		Capacity	3250 mAh
		Charging time	Approx. 6.0 hours (ambient temperature)
	Backup battery	RAM data	Electric double layer capacitor 3 minutes *1*2
Others	Audio		Speaker, Microphone
	Vibration		Available
	Camera		13MP, autofocus
	Sensor		Accelerometer, Ambient Light, Gyroscope
	USB		USB Type-C port
Environmental resistance	Enclosure rating		IP65
	Drop resistance (from a height)		Onto concrete from a height of 1.8 m Up to 20,000 impacts from a height of 30 cm *2
	Ambient operating temperature		-20 to +50°C (no freezing) *3 When charging 0 to +40°C
	Ambient operating humidity		20 to 85% RH (no condensation)
	Ambient storage temperature		-20 to +70°C (no freezing)
	Ambient storage humidity		20 to 85% RH (no condensation)
Dimensions			88mm x 134mm x 235mm
Weight			Approx. 265 g (with battery pack)

*1 When the main battery is not attached or has no remaining charge.
*2 This is a test value, and the value is not guaranteed.
*3 Continuous usage time may be shortened significantly in a subfreezing environment due to a load. Be sure to conduct a test before use.

Outline dimensional drawing



WARRANTIES AND DISCLAIMERS

- (1) KEYENCE warrants the Products to be free of defects in materials and workmanship for a period of one (1) year from the date of shipment. If any models or samples were shown to Buyer, such models or samples were used merely to illustrate the general type and quality of the Products and not to represent that the Products would necessarily conform to said models or samples. Any Products found to be defective must be shipped to KEYENCE with all shipping costs paid by Buyer or offered to KEYENCE for inspection and examination. Upon examination by KEYENCE, KEYENCE, at its sole option, will refund the purchase price of, or repair or replace at no charge any Products found to be defective. This warranty does not apply to any defects resulting from any action of Buyer, including but not limited to improper installation, improper interfacing, improper repair, unauthorized modification, misapplication and mishandling, such as exposure to excessive current, heat, coldness, moisture, vibration or outdoors air. Components which wear are not warranted.
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