

# EM45A1/ EM45B1 Regulatory Guide



MN-005215-02EN-P 1/16/25



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## Regulatory Information

This device is approved under Zebra Technologies Corporation.

This guide applies to the following model numbers:

- EM45A1
- EM45B1

All Zebra devices are designed to be compliant with the rules and regulations in the locations they are sold and will be labeled as required.

Local language translation / (BG) Превод на местен език / (CZ) Překlad do místního jazyka / (DE) Übersetzung in die Landessprache / (EL) Μετάφραση τοπικής γλώσσας / (ES) Traducción de idiomas locales / (ET) Kohaliku keele tõlge / (FI) Paikallinen käänös / (FR) Traduction en langue locale / (HR) Prijevod na lokalni jezik / (HU) Helyi nyelvű fordítás / (IT) Traduzione in lingua locale / (JA) 現地語翻訳 / (KR) 현지 언어 번역 / (LT) Vietinės kalbos vertimas / (LV) Tulkojums vietējāvalodā / (NL) Vertaling in lokale taal / (PL) Tłumaczenie na język lokalny / (PT) Tradução do idioma local / (RO) Traducere în limba locală / (RU) Перевод на местный язык / (SK) Preklad do miestneho jazyka / (SL) Prevajanje v lokalni jezik / (SR) Превод на локални језик / (SV) Översättning av lokalt språk / (TR) Yerel dil çevirisi / (ZH-CN) 当地语言翻译 / (ZH-TW) 當地語言翻譯 [zebra.com/support](http://zebra.com/support)

Any changes or modifications to Zebra equipment not expressly approved by Zebra could void the user's authority to operate the equipment.

Declared maximum operating temperature: 50°C

When connected to a power supply, the maximum operating/charging ambient is 40°C.

For use only with Zebra approved and UL Listed mobile devices, Zebra approved, and UL Listed/Recognized battery packs.

**CAUTION:** Only use Zebra approved and NRTL-certified accessories, battery packs, and battery chargers. Do NOT attempt to charge damp/wet mobile computers, printers or batteries. All components must be dry before connecting to an external power source.

## Bluetooth® Wireless Technology

This is an approved Bluetooth® product. For more information on the Bluetooth SIG listing, please visit [bluetooth.com](http://bluetooth.com).

## Regulatory Markings

Regulatory markings subject to certification are applied to the device. Refer to the Declaration of Conformity (DoC) for details of other country markings. The DoC is available at: [zebra.com/doc](http://zebra.com/doc).

The regulatory marks specific to this device (including FCC and ISED) are available on the screen of the device by following these instructions:

Go to **Settings > Regulatory**.

## Health and Safety Recommendations

### Vehicle Installation

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (including safety systems). Check with the manufacturer or its representative regarding your vehicle. Ensure the equipment is installed to avoid driver distractions. You should also consult the manufacturer about any equipment that has been added to your vehicle.

Position the device within easy reach. User should be able to access the device without removing their eyes from the road.

**IMPORTANT:** Before installing or using, check national and local laws regarding distracted driving.

### Safety on the Road

Give your full attention to driving. Obey the laws and regulations on the use of wireless devices in the areas where you drive.

The wireless industry reminds you to use your device / phone safely when driving.

## Restricted Use Locations

Remember to observe restrictions and obey all signs and instructions on the use of electronic devices in restricted use locations.

## Safety in Hospitals and Aircraft

Wireless devices transmit radio frequency energy that may affect medical electrical equipment and aircraft's operation. Wireless devices should be switched off wherever you are requested to do so in hospitals, clinics, healthcare facilities or by airline staff. These requests are designed to prevent possible interference with sensitive equipments.

### Medical Devices

It is recommended that a minimum separation distance of 20 cm (8 in.) be maintained between a wireless device and a medical devices such as pacemakers, defibrillator, or other implantable devices to avoid potential interference with the medical device. Pacemaker users should keep the device at the opposite side of the pacemaker or turn OFF the device if suspected of interference.

Please consult your physician or the manufacturer of the medical device to determine if the operation of your wireless product may interfere with the medical device.

## RF Exposure Guidelines

### Safety Information

#### Reducing RF Exposure – Use Properly

Only operate the device in accordance with the instructions supplied.

The device complies with internationally recognized standards covering human exposure to electromagnetic fields. For information on international human exposure to electromagnetic fields, refer to the Zebra Declaration of Conformity (DoC) at [zebra.com/doc](http://zebra.com/doc).

Use only Zebra tested and approved headset, belt-clips, holsters, and similar accessories to ensure RF exposure compliance. If applicable, follow the instructions for use as detailed in the accessory guide.

The use of third-party belt clips, holsters, and similar accessories may not comply with RF exposure compliance requirements and should be avoided.

For further information on the safety of RF energy from wireless devices, refer to RF exposure and assessment standards section at [zebra.com/responsibility](http://zebra.com/responsibility).

To satisfy RF exposure requirements, this device must operate with a minimum separation distance of 1.5 cm or more from a user's body and nearby persons.

## Power Supply

**WARNING ELECTRICAL SHOCK:** Use only a Zebra approved, Certified ITE LPS power supply with appropriate electrical ratings. Use of alternative power supply will invalidate any approvals given to this unit and may be dangerous.

### USB-C Charging Capabilities

When charging the device via the USB-C port, the power delivered by the charger must be between the minimum of 7.5 watts (as required by the radio equipment) and maximum of 27 watts to achieve the maximum charging speed. For maximum charging performance, it is recommended to use a USB-C charger with a power rating of at least 27 watts. USB-Power Delivery (PD) fast charging is supported.

### Batteries and Power Packs

This information applies to Zebra-approved batteries and power packs containing batteries.

### Battery Information

**CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Dispose of batteries according to instructions.

Use only Zebra approved batteries. Accessories that have battery charging capability are approved for use with the following battery models:

- Model BT-000501 (3.88 VDC, 4612 mAh)

Zebra approved rechargeable battery packs are designed and constructed to the highest standards within the industry.

However, there are limitations as to how long a battery can operate or be stored before needing replacement. Many factors affect the actual life cycle of a battery pack such as heat, cold, harsh environmental conditions, and severe drops.

When batteries are stored over six months, some irreversible deterioration in overall battery quality may occur. Store batteries at half charge in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts, and electrolyte leakage. When storing batteries for one year or longer, the charge level should be verified at least once a year and charged to half charge.

Replace the battery when a significant loss of run time is detected.

Standard warranty period for all Zebra batteries is one year, regardless if the battery was purchased separately or included as part of the host device. For more information on Zebra batteries, please visit [zebra.com/batterydocumentation](http://zebra.com/batterydocumentation) and select the Battery Best Practices link.

## Battery Safety Guidelines

**IMPORTANT – SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS**

**WARNING –** When using this product basic safety precautions should always be followed, including the following:

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non-commercial environment.
- Read all the instructions before using the product.
- Follow battery usage, storage, and charging guidelines found in the user's guide.
- Improper battery use may result in a fire, explosion, or other hazard.
- Batteries subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.
- To charge the mobile device battery, the battery and charger temperatures must be between 0°C and 40°C (32°F and 104°F).
- Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact Zebra support.

- Do not disassemble or open, crush, bend or deform, puncture, or shred. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify, disassemble, or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water, rain, snow or other liquids, or expose to fire, explosion, or other hazard.

- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.

- To reduce the risk of injury, close supervision is necessary when used near children.
- Please follow local regulations to promptly dispose of used re-chargeable batteries.
- Do not dispose of batteries in fire. Exposure to temperatures over 100°C (212°F) may cause explosion.

- Seek medical advice immediately if a battery has been swallowed.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- If you suspect damage to your equipment or battery, contact Zebra support to arrange for inspection.

## CE Marking and European Economic Area (EEA)

### Statement of Compliance

Zebra hereby declares that this radio equipment is in compliance with Directives 2014/53/EU and 2011/65/EU.

Any radio operation limitations within EEA countries are identified in Appendix A of EU Declaration of Conformity. The full text of the EU Declaration of Conformity is available at [zebra.com/doc](http://zebra.com/doc).

### Environmental Compliance

For compliance declarations, recycling information, and materials used for products and packaging please visit [zebra.com/environment](http://zebra.com/environment).

EU Importer : Zebra Technologies B.V

Address: Mercurius 12, 8448 GX Heerenveen, Netherlands

### Waste Electrical and Electronic Equipment (WEEE)

For EU and UK Customers: For products at the end of their life, please refer to recycling/disposal advice at [zebra.com/weee](http://zebra.com/weee).

## United States and Canada Regulatory

### Radio Frequency Interference Notices

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 interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed

to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Operation of transmitters in the 5.925 - 7.125 GHz band is prohibited for controlling or communicating with unmanned aircraft systems.

### Radio Frequency Interference Requirements – Canada

Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-003 (B)/NMB-003(B)

This device complies with Innovation, Science and Economic Development 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.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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 radio électrique subi même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device is restricted to indoor use when operating in the 5,150 - 5,350 MHz frequency range.

Lorsqu'il fonctionne dans la plage de fréquences 5,150 - 5,350 MHz, cet appareil doit être utilisé exclusivement en extérieur.

Devices shall not be used for control of or communications with unmanned aircraft systems.

Les dispositifs ne doivent pas être utilisés pour commander des systèmes d'aéronef sans pilote ni pour communiquer avec de tels systèmes.

### RF Exposure Requirements - FCC and ISED

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated in compliance with the FCC RF emission guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of [fcc.gov/oet/ea/fccid](http://fcc.gov/oet/ea/fccid).

To satisfy RF exposure requirements, this device must operate with a minimum separation distance of 1.5 cm or more from a user's body and nearby persons.

Pour satisfaire aux exigences d'exposition aux radio fréquences, cet appareil doit fonctionner avec une distance de séparation minimale de 1.5 cm ou plus de corps d'une personne.

#### Hotspot Mode

To satisfy RF exposure requirements in hotspot mode, this device must operate with a minimum separation distance of 1.0 cm or more from a user's body and nearby persons.

Pour satisfaire aux exigences d'exposition RF en mode hotspot, cet appareil doit fonctionner avec une distance de séparation minimale de 1,0 cm ou plus du corps de l'utilisateur et des personnes à proximité.

#### Co-located Statement

To comply with FCC RF exposure compliance requirement, the antenna used for this transmitter must not be co-located (within 20 cm) or operating in conjunction with any other transmitter/antenna except those already approved in this filling.

#### Hotspot ISED Notice

When operating in hotspot mode, this device is restricted to indoor use when operating in the 5,150 - 5,350 MHz frequency range.

En mode de connexion partagée (hotspot), l'utilisation de cet appareil doit se faire exclusivement en extérieur lorsqu'il fonctionne dans la plage de fréquences 5,150 - 5,350 MHz.

#### Use with Hearing Aids - FCC - For EM45A1

When some wireless devices are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and wireless devices also vary in the amount of interference they generate. In the event of interference, you may want to consult your hearing aid supplier to discuss solutions.

The wireless telephone industry has developed ratings for some of their mobile phones to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Zebra terminals that are rated have the rating included on the Declaration of Conformity (DoC) at [zebra.com/doc](http://zebra.com/doc).

The ratings are not guarantees. Results will vary depending on the user’s hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated phone successfully. Trying out the phone with your hearing device is the best way to evaluate it for your personal needs.

#### ANSI C63.19 Rating System

1. This phone is hearing aid compatible as determined by ANSI C63.19-2019.

2. This phone has been tested and certified for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies in this phone that have not been tested for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise.

Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

3. The ANSI C63.19-2019 standard does not use the M/T rating system for showing the hearing aid compatible of the phone that older version of the standard used. Instead, it uses the conversational gains for the phone’s hearing aid compatible capabilities.

4. The volume control performance has been evaluated according to ANSI C63.19-2019 and waiver DA-23-914. The lowest conversational gain is 15.7 dB with a hearing aid, and 16.8 dB without a hearing-aid.

Air Interface	Bands	Codec	Hearing Aid Compatibility (HAC)		
			RF	T-Coil	Volume Control
LTE/NR/Wi-Fi	LTE: 2/4/5/7/12/13/14/17/25/26/30/38/41/48/66/71	AMR-NR/WB	Y	Y	Y <sup>(2)</sup>
		EVS-NB/WB	Y	Y	Y
	NR: 2/5/7/12/13/14/25/26/30/38/41/48/66/71/77/78	EVS-SWB, Opus, G.711 a-Law 8 KHz, G.711 u-Law 8 KHz, G.729 8 KHz, G.722 16 KHz, GSM 8 KHz	Y	Y	N
UMTS	UMTS: III/IV/V	AMR-NB/WB	Y	Y	Y <sup>(2)</sup>
		Opus, G.711 a-Law 8 KHz, G.711 u-Law 8 KHz, G.729 8 KHz, G.722 16 KHz, GSM 8 KHz	Y	Y	N
Wi-Fi	UNII.5 <sup>(1)</sup> /V/7/8	AMR-NR/W, EVS-NB/WB, SWB, Opus, G.711 a-Law 8 KHz, G.711 u-Law 8 KHz, G.729 8 KHz, G.722 16 KHz, GSM 8 KHz	N	N	N
<div><small> <p>1: UNII-5 is tested for HAC for operations which are entirely below 6 GHz. Above 6 GHz is not tested due to outside of the current scope of ANSI C63.19 and FCC HAC regulations.</p> 2: According to FCC waiver DA 23-914, HAC is only partially tested for the conversational gain.</small></div>					

#### UL Listed Products with GPS

Underwriters Laboratories Inc. (UL) has not tested the performance or reliability of the Global Positioning System (GPS) hardware, operating software, or other aspects of this product. UL has only tested for fire, shock, or casualties as outlined in UL’s Standard(s) for Safety for Information Technology Equipment. UL Certification does not cover the performance or reliability of the GPS hardware and GPS operating software. UL makes no representations, warranties, or certifications whatsoever regarding the performance or reliability of any GPS related functions of this product.

#### Marquage UL des produits équipés d'un GPS

Les tests menés par Underwriters Laboratories Inc. (UL) ne portent ni sur les performances, ni sur la fiabilité du matériel et du logiciel d'exploitation du GPS (Global Positioning System), ni sur tout autre aspect de ce produit. UL a uniquement testé la résistance au feu, aux chocs et aux sinistres, comme le définit la norme UL60950-1 relative à la sécurité des matériels de traitement de l'information. La certification UL ne couvre ni les performances, ni la fiabilité du matériel et du logiciel d'exploitation GPS. UL ne formule aucune déclaration, ni ne délivre aucune garantie ni aucun certificat concernant les performances et la fiabilité des fonctions GPS de ce produit.

## France

Cet appareil a été testé et déclaré conforme aux limites applicables d'exposition aux radiofréquences (RF).

Le débit d'absorption spécifique (DAS) local quantifie l'exposition de l'utilisateur aux ondes électromagnétiques de l'équipement concerné.

Les valeurs SAR les plus élevées sont disponibles sur la déclaration de conformité (DoC) disponible sur: [zebra.com/doc](http://zebra.com/doc)

## México

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.

## LOCALIZACIÓN DEL IMEI.

El IMEI está disponible en la etiqueta del producto y en la pantalla del dispositivo siguiendo estas instrucciones.

**Opción 1:**

Ir a **Ajustes > Acerca del teléfono**.

**Opción 2:**

Vaya a la aplicación Teléfono: Marque \*#06#

Este dispositivo está diseñado para recibir alertas de emergencia inalámbricas utilizando el Servicio de Radiodifusión Celular como se especifica en IFT-011 Pt3. Si su proveedor de red celular admite este servicio, se proporcionarán alertas mientras se encuentre en el área de cobertura del proveedor. Si viaja fuera del área de cobertura de su proveedor, es posible que las alertas no estén disponibles. Para obtener más información, póngase en contacto con su proveedor de red.

La configuración de Alerta inalámbrica de emergencia está disponible en la configuración de la aplicación Mensajes seleccionando Avanzado. Una vez que se muestran las alertas, la configuración se puede ver y cambiar. Esto permite anular la selección de las alertas no obligatorias y habilitar las alertas de prueba si es necesario. También existe una opción para habilitar la conversión de texto a voz que permite que los mensajes de alerta de texto se hablen en voz alta para que el usuario escuche el mensaje.

## 臺灣

低功率電波輻射性電機管理辦法

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作

減少電磁波影響，請妥適使用

型號 EM45B1 SAR 標準值 2.0 W/kg ；送測產品實測值為：1.15 W/kg

公司資訊

台灣班馬科技股份有限公司 / 台北市信義區松高路9號 13 樓

行政院環保署 (EPA) 要求乾電池製造或進口商，需依廢棄物清理法第 15 條之規定，於販售、贈

送或促銷的電池上標示回收標誌。請聯絡合格的台灣回收廠商，以正確棄置電池。

## UK CA United Kingdom Statement of Compliance

Zebra hereby declares that this radio equipment is in compliance with the Radio Equipment Regulations 2017 and the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

Any radio operation limitations within UK are identified in Appendix A of UK Declaration of Conformity.

The full text of the UK Declaration of Conformity is available at: [zebra.com/doc](http://zebra.com/doc).

UK Importer: Zebra Technologies Europe Limited

Address: Dukes Meadow, Millboard Rd, Bourne End, Buckinghamshire, SL8 5XF

## Warranty

For the complete Zebra hardware product warranty statement, go to: [zebra.com/warranty](http://zebra.com/warranty).

## Service Information

Before you use the unit, it must be configured to operate in your facility's network and run your applications.

If you have a problem running your unit or using your equipment, contact your facility's Technical or System Support. If there is a problem with the equipment, they will contact Zebra support at [zebra.com/support](http://zebra.com/support).

For the latest version of the guide go to: [zebra.com/support](http://zebra.com/support).

## Software Support

Zebra wants to ensure that customers have the latest entitled software at the time of device purchase in order to keep the device operating at peak performance levels. To confirm that your Zebra device has the latest entitled software available at the time of purchase, go to [zebra.com/support](http://zebra.com/support).

Check for the latest software from **Support > Products**, or search for the device and select **Support > Software Downloads**.

If your device does not have the latest entitled software as of your device purchase date, e-mail Zebra at [entitlementservices@zebra.com](mailto:entitlementservices@zebra.com) and ensure you include the following essential device information:

- Model number
- Serial number
- Proof of purchase
- Title of the software download you are requesting.

If it is determined by Zebra that your device is entitled to the latest version of software, as of the date you purchased your device, you will receive an e-mail containing a link directing you to a Zebra Web site to download the appropriate software.

## Product Support Information

- For information on using this product, see the User Guide at [zebra.com/em45-info](http://zebra.com/em45-info).
- To find quick answers to known product behaviors, access our knowledge articles at [supportcommunity.zebra.com/s/knowledge-base](http://supportcommunity.zebra.com/s/knowledge-base).
- Ask your questions in our Support community at [supportcommunity.zebra.com](http://supportcommunity.zebra.com).
- Download product manuals, drivers, software, and view how-to videos at [zebra.com/support](http://zebra.com/support).
- To request a repair for your product, go to [zebra.com/repair](http://zebra.com/repair).

## Patent Information

To view Zebra patents, go to [ip.zebra.com](http://ip.zebra.com).

