

MK500/4000

Quick Reference Guide



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Warranty

For the complete Motorola hardware product warranty statement, go to: <http://www.motorola.com/enterprisemobility/warranty>.



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Health and Safety Recommendations

Ergonomic Recommendations

Caution: In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

Regulatory Information

This device is approved under the Symbol Technologies brand: Symbol Technologies, Inc., is the Enterprise Mobility business of Motorola, Inc. ("Motorola").

This guide applies to the following Model Numbers: MK4900, MK4000, MK590, MK500. All Motorola/Symbol devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Local language translations are available at the following website:

<http://www.motorola.com/enterprisemobility/support>

Any changes or modifications to Motorola/Symbol Technologies equipment, not expressly approved by Motorola/Symbol Technologies, could void the user's authority to operate the equipment.

Only use Motorola/Symbol approved and UL Listed accessories.

All components must be dry before connecting to an external power source.

Maximum operating temperature: 104° F / 40° C

Radio Modules

The device contains approved radio module(s). These module(s) are identified below.

Motorola/Symbol SDIO Radio module with 802.11a/b/g Wireless LAN, Type(s): 21-92955

Wireless Device Country Approvals

Regulatory markings, subject to certification, are applied to the device signifying the radio(s) is/are approved for use in the following countries: United States, Canada, Japan, China, S. Korea, Australia, and Europe 1,2.

Please refer to the Symbol Declaration of Conformity (DoC) for details of other country markings. This is available at <http://www.motorola.com/doc>.

Note 1: For 2.4GHz or 5GHz Products: Europe includes, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.



Operation of the device without regulatory approval is illegal.

Country Roaming - Note for Client / Mobile devices

This device incorporates the International Roaming feature (IEEE802.11d) which will ensure the product operates on the correct channels for the particular country of use.

Ad-Hoc Operation - 802.11a Terminal Devices and Radio Modules only

Ad-Hoc operation is limited to Channels 36-48 (5150-5250 MHz). Use of this band is restricted to Indoor Use Only, any other use will make the operation of this device illegal.

Frequency of Operation - FCC and IC

The use in the UNII (Unlicensed National Information Infrastructure) band 1 5150-5250 MHz band is restricted to Indoor Use Only; any other use will make the operation of this device illegal.

The available channels for 802.11 b/g operation in the US are Channels 1 to 11. The range of channels is limited by firmware.



Warnings for Use of Wireless Devices

Please observe all warning notices with regard to the usage of wireless devices.

Potentially Hazardous Atmospheres - Fixed Installations

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).



Safety in Hospitals

Wireless devices transmit radio frequency energy and may affect medical electrical equipment.

Wireless devices should be switched off wherever you are requested to do so in hospitals, clinics or healthcare facilities. These requests are designed to prevent possible interference with sensitive medical equipment.

Wireless devices transmit radio frequency energy and may affect medical electrical equipment. When installed adjacent to other equipment, it is advised to verify that the adjacent equipment is not adversely affected.

Pacemakers

Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Persons with pacemakers:

- Should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON.
- Should not carry the device in a breast pocket.
- Should use the ear furthest from the pacemaker to minimise the potential for interference.
- If you have any reason to suspect that interference is taking place, turn OFF your device.

Other Medical Devices

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.

This device is not HAC compliant during Voice-Over-IP (VOIP) calls.



RF Exposure Guidelines

Safety Information

Reducing RF Exposure - Use Properly

Only operate the device in accordance with the instructions supplied.

International

The device complies with internationally recognized standards covering human exposure to electromagnetic fields from radio devices. For information on "International" human exposure to electromagnetic fields refer to the Motorola/Symbol Declaration of Conformity (DoC) at <http://www.motorola.com/doc>.

EU

Remote and Standalone Antenna Configurations

To comply with EU RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

US and Canada

Co-located statement

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

Remote and Standalone Antenna Configurations

To satisfy FCC RF exposure requirements, a mobile transmitting device must operate with a minimum separation distance of 20 cm or more from a person's body.

Laser Devices



Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007 and EN60825-1:2007 and IEC 60825-1(ED.2).

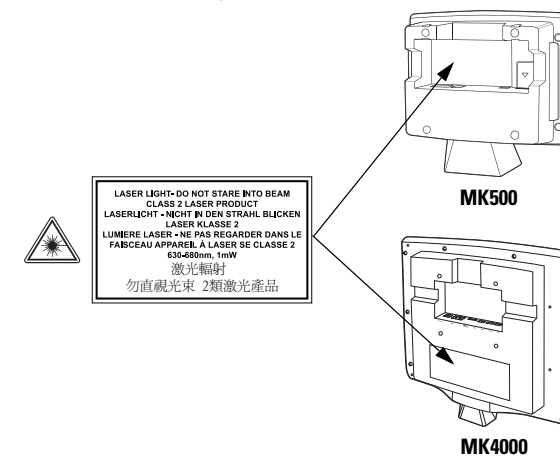
The laser classification is marked on one of the labels on the device.

Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

Scanner Labeling



Power Supply

MK500: Use ONLY a LISTED Motorola, Type no. 50-14000 (24Vdc/ 625mA minimum), or PWRS-14000 (24Vdc/ 625mA minimum), Direct Plug-In Power supply, marked Class 2 or LPS (IEC60950-1, SELV). Use of alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

MK4000: Use ONLY a LISTED Motorola, Type no. 50-14000 (24Vdc/ 1.5A minimum), or PWRS-14000 (24Vdc/ 1.5A minimum), Direct Plug-In Power supply, marked Class 2 or LPS (IEC60950-1, SELV). Use of alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

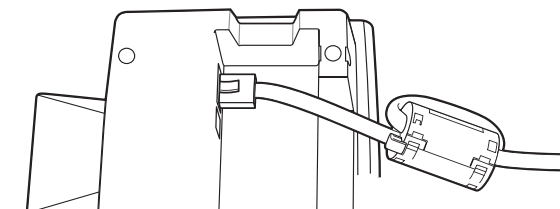
Power-over-Ethernet (PoE)

MK500: Use only with approved limited power source 48 VDC, 312.5 mA.

MK4000: Use only with approved limited power source 48 VDC, 0.625A.

MK500: When using PoE, you must place a ferrite core (Motorola p/n 34.10P16.001) on the Ethernet cable as follows:

1. Open the ferrite core and place it on the cable.
2. Route the cable outside the ferrite core once and then close the ferrite core.



Radio Frequency Interference Requirements-FCC



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.

Radio Transmitters (Part 15)

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.

Radio Frequency Interference Requirements - Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio Transmitters

For RLAN Devices:

The use of 5 GHz RLAN's, for use in Canada, have the following restrictions:

- Restricted Band 5.60 - 5.65 GHz
- This device complies with RSS 210 of Industry & Science Canada. 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.

Label Marking: The Term "IC:" before the radio certification only signifies that Industry Canada technical specifications were met.

CE Marking and European Economic Area (EEA)

The use of 2.4GHz RLAN's, for use through the EEA, have the following restrictions:

- Maximum radiated transmit power of 100 mW EIRP in the frequency range 2.400 - 2.4835 GHz
- France, outside usage is restricted to 2.4 - 2.454 GHz.
- Italy requires a user license for outside usage.

Statement of Compliance

Motorola/Symbol hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directives 1999/5/EC, 2004/108/EC and 2006/95/EC. Declaration of Conformities may be obtained from <http://www.motorola.com/doc>.

Japan (VCCI) - Voluntary Control Council for Interference

Class B ITE

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manua

Korea Warning Statement for Class B ITE

B급 기기 - 이 기기는 가정용으로 전자파 적합등록을 한 기기이오니 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

As this equipment has obtained EMC registration for household use, it can be used in any area including residential areas.

Other Countries

Australia

Use of 5GHz RLAN's in Australia is restricted in the following band 5.50 - 5.65GHz.

Brazil

Declarações Regulamentares para

Nota: "A marca de certificação se aplica ao Transceptor, modelo MK4900, MK590. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário."

Para maiores informações sobre ANATEL consulte o site: www.anatel.gov.br

Mexico

Restrict Frequency Range to: 2.450 - 2.4835 GHz.

Taiwan

臺灣
低功率電波輻射性電機管理辦法

第十二條
經型式認證合格之低功率射頻電機，非經許可，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。

第十四條
低功率射頻電機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。前項合法通信，指依電信規定作業之無線電通信。低功率射頻電機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。

在5.25-5.35 赫赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

Korea for MK4900, MK590

For radio equipment using 2400~2483.5 MHz or 5725~5825 MHz

당해 무선설비는 운용 중 전파혼신 가능성이 있음

당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.
당해 무선설비 는전파혼 신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.

Waste Electrical and Electronic Equipment (WEEE)

Bulgarian: За клиенти от ЕС: След края на ползения им живот всички продукти трябва да се вършат на Motorola за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.motorola.com/recycling/weee.

Ceština: Pro zákazníky z EU: Všechny produkty je nutné po skonění jejich životnosti vrátit společnosti Motorola k recyklaci. Informace o způsobu vrácení produktu najdete na webovė stránce: http://www.motorola.com/recycling/weee.

Dansk: Til kunder i EU: Alle produkter skal returneres til Motorola til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.motorola.com/recycling/weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Motorola zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.motorola.com/recycling/weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Motorola για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.motorola.com/recycling/weee στο Διαδίκτυο.

Eesti: EL Klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Motorola'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.motorola.com/recycling/weee.

English: For EU Customers: All products at the end of their life must be returned to Motorola for recycling. For information on how to return product, please go to: http://www.motorola.com/recycling/weee.

Español: Para clientes en la Unión Europea: todos los productos deberán entregarse a Motorola al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.motorola.com/recycling/weee.

Français: Clients de l'Union Européenne : Tous les produits en fin de cycle de vie doivent être retournés à Motorola pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : http://www.motorola.com/recycle/weee.

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Motorola al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: http://www.motorola.com/recycling/weee.

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Motorola otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Motorola, lūdzu, skatiet: http://www.motorola.com/recycling/weee.

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti gražinti utilizuoti į kompaniją „Motorola“. Daugiau informacijos, kaip gražinti gaminiį, rasite: http://www.motorola.com/recycling/weee.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement termékét a Motorola vállalatához kell eljuttatni újrahaznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.motorola.com/recycling/weee weboldalra.

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-hajja ta' l-użu tagħhom, iridu jiġu rritornati għand Motorola għar-riciklagg. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok zur: http://www.motorola.com/recycling/weee.

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Motorola te worden teruggezonden voor recycling. Raadpleeg http://www.motorola.com/recycling/weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale¿y zwrócić do firmy Motorola w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¿ się na stronie internetowej http://www.motorola.com/recycling/weee.

Português: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Motorola para reciclagem. Para obter informações sobre como devolver o produto, visite: http://www.motorola.com/recycling/weee.

Românesc: Pentru clienții din UE: Toate produsele, la sfârșitul duratei lor de funcționare, trebuie returnate la Motorola pentru reciclare. Pentru informații despre returnarea produsului, accesați: http://www.motorola.com/recycling/weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Motorola za reciklažo. Za informacije o vračilu izdelka obiščite: http://www.motorola.com/recycling/weee.

Slovenčina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Motorola na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.motorola.com/recycling/weee.

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Motorola-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.motorola.com/recycling/weee.

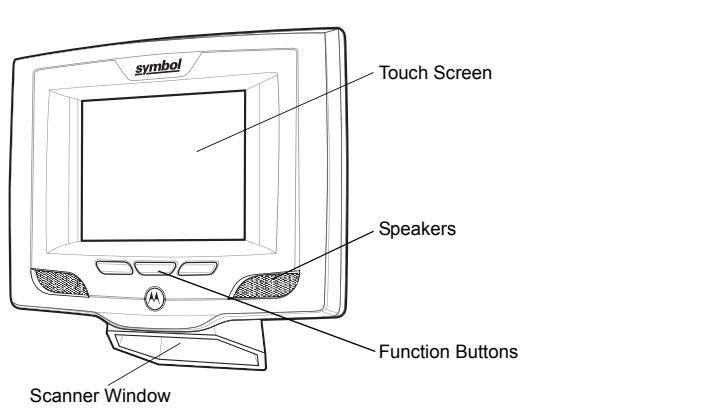
Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Motorola för återvinning. Information om hur du returnerar produkten finns på http://www.motorola.com/recycling/weee.

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Motorola'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: http://www.motorola.com/recycling/weee.

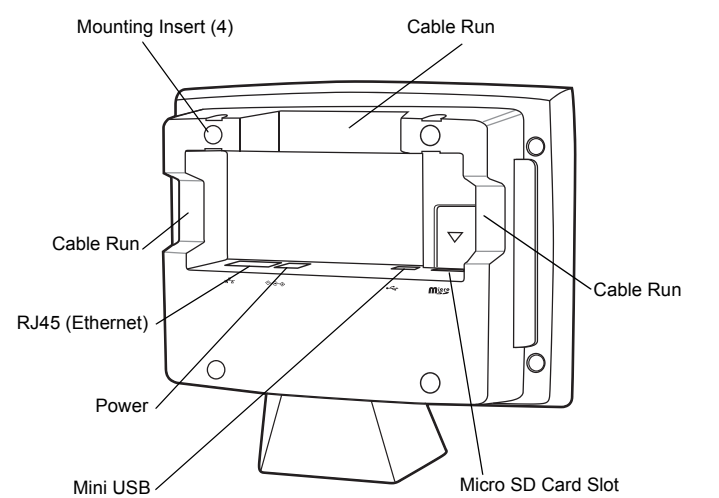
Unpacking

Remove the MK4000 or MK500 from its packing and inspect it for damage. Keep the packing, it is the approved shipping container and should be used if the device needs to be returned for servicing.

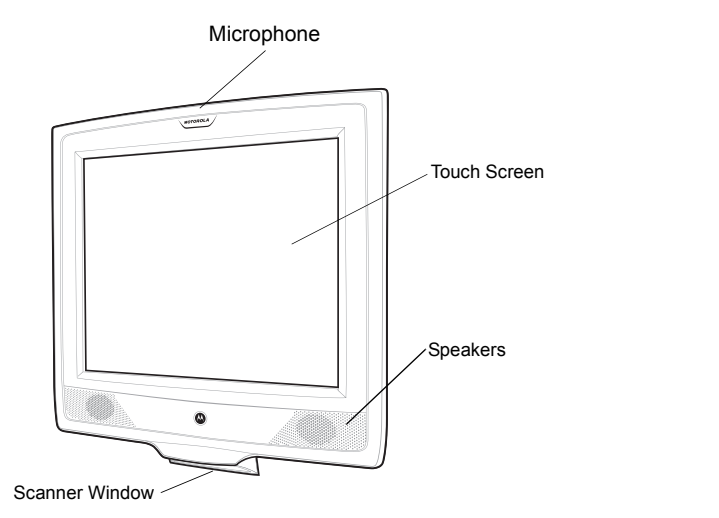
MK500 Parts



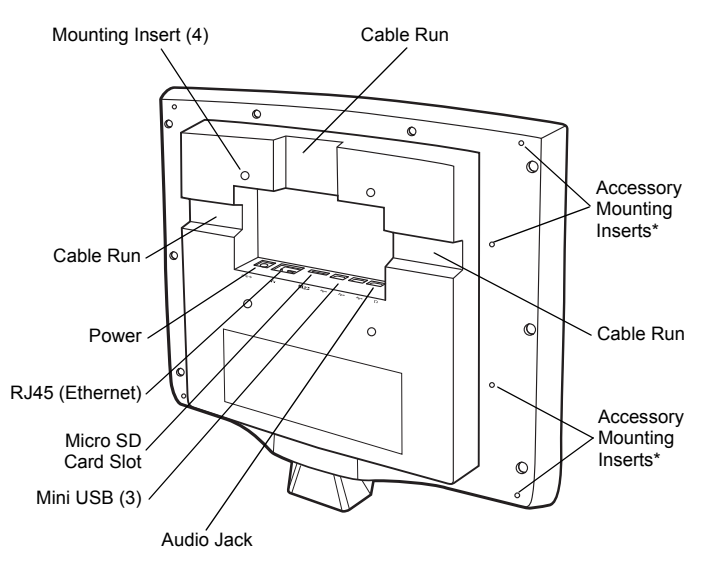
Back View



MK4000 Parts



Back View



*Four M3 x 6 mm inserts per side for accessory mounting

Mounting

Use a standard VESA mount to mount the device:

- Select a VESA mount that conforms to the 75 mm VESA specification for the MK500, or the 100 mm VESA specification for the MK4000.
- The device's mounting inserts are M4 x 8.1 mm. When selecting an appropriate screw type, ensure its length does not penetrate the device's back housing more than 8.1 mm after going through the mounting plate.
- Align the VESA mounting holes with the mounting holes on the back of the device.
- Insert the screws through each of the four aligned mounting holes.

Service Information

If you have a problem using the equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact Motorola Enterprise Mobility Support at: <http://www.motorola.com/enterprisemobility/contactsupport>.

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For the latest version of this guide go to:

<http://www.motorola.com/enterprisemobility/manuals>.