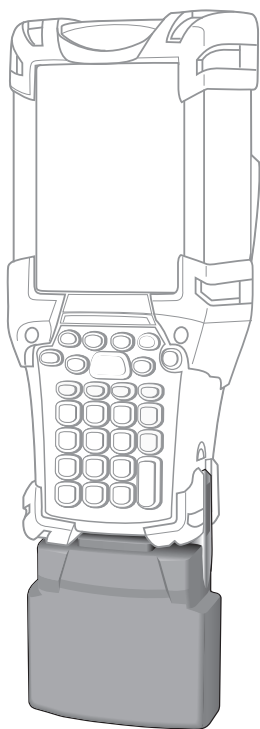


MDM9001-C010R

Modem Module

Quick Reference Guide



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Zebra Technologies Corporation

Lincolnshire, IL U.S.A.

<http://www.zebra.com>

Warranty

For the complete Zebra hardware product warranty statement, go to:

<http://www.zebra.com/warranty>.

Introduction

This guide describes how to use an MDM9001-C010R Modem Module with Zebra MC90XX Series mobile computers.

The modem module:

- Provides AC power for operating the mobile computer and charging the battery in the mobile computer.
- Provides for data communication between a mobile computer and a host computer, remotely through a phone line.
- Synchronizes information between the mobile computer and a host computer. (With customized or third party software, it can also be used to synchronize the mobile computer with corporate databases.)
- Re-charges the mobile computer's battery.

The modem module snaps onto the bottom of the mobile computer and can be removed easily when not in use.

About This Guide

This guide provides basic information on the following topics:

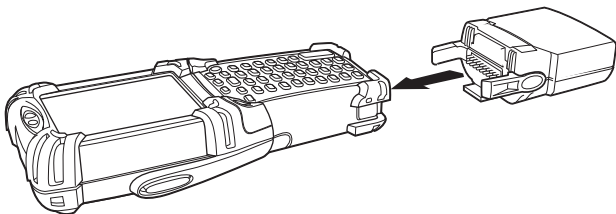
- *Modem Requirements on page 4*
- *Attaching the Modem Module on page 4*
- *Removing the Modem Module on page 5*
- *Setup on page 6*
- *Battery Charging on page 6*
- *Mobile Computer Set Up on page 7*
- *Troubleshooting on page 8*
- *Regulatory Information on page 10*
- *Service Information on back cover.*

For detailed information about Series 9000 mobile computers, refer to the mobile computer's *Product Reference Guide*, available at: <http://www.zebra.com/support>.

Modem Requirements

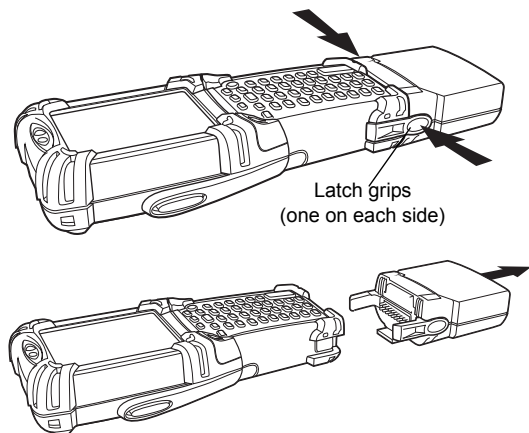
- Mobile computer.
- Power Supply, p/n 50-14000-148R.
- AC Cord, appropriate for the country.
- Functioning telephone jack that supports plug-in modems connected to the local telephone system.
- Telephone number, IP address and DNS/WINS address information from the dial-in server administrator.
- Dial-in account on the host system, including a user ID and password.
- Setup of Country Codes to use the modem with the appropriate country's telephone network (refer to the mobile computer's reference guide).

Attaching the Modem Module



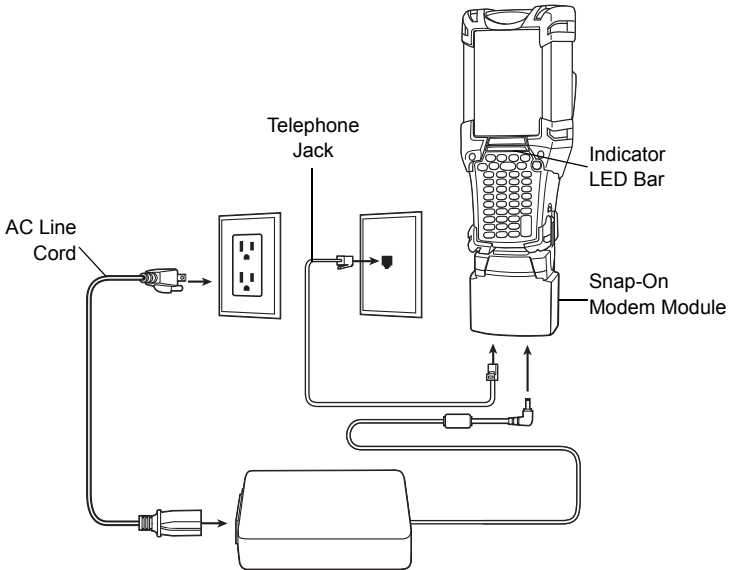
Removing the Modem Module

To remove, simultaneously squeeze the latch grips on each side of the modem module and pull the modem module from the mobile computer.



NOTE The mobile computer cannot be inserted into a cradle with the modem module attached.

Setup



NOTE If the battery in the mobile computer is fully charged, the power supply connection is recommended but not required for a modem connection.

Battery Charging

To use the modem module to charge the battery in the mobile computer, connect the power supply into the modem module and wall outlet as shown in [Setup](#). When the battery charges, the Indicator LED Bar on the mobile computer blinks amber to indicate that the battery is charging. See [Charging LED Indicator on page 7](#) for other indications.

When charging, the modem module allows power to pass directly through to the mobile computer. In turn, the mobile computer then provides regulated power to the modem module.

Charging LED Indicator

LED	Indication
Off	Mobile computer is not attached correctly to the modem module; modem module not receiving power.
Fast Blinking Amber	Error in charging. Ensure modem module is securely attached to mobile computer. Ensure power supply is connected correctly to modem module.
Slow Blinking Amber	Mobile computer is charging correctly.
Solid Amber	Charging is complete. Note: When the battery is initially inserted in the mobile computer, the amber LED flashes once if the battery power is low or the battery is not fully inserted.

Mobile Computer Set Up

Refer to the MC9000 series mobile computer *Product Reference Guides* for information on setting up the mobile computer to operate with the modem module.

Troubleshooting

Symptom	Possible Cause	Action
Mobile computer battery is not charging through the power connection.	The power cable is not attached securely.	Ensure the power cable is connected securely to both the modem module and to the AC power.
	Mobile computer and modem module were unplugged from AC power too soon.	Plug the mobile computer and modem module back into the AC power source. If a mobile computer battery pack is fully depleted, it can take up to four hours to fully charge.
	Battery is faulty.	Replace the battery.
	Modem module is not securely attached to the bottom of the mobile computer.	Remove and re-attach the modem module ensuring the mobile computer is seated firmly in the modem module.
Mobile computer not communicating through the modem module.	The telephone jack is not fully connected.	Ensure the telephone jack is connected securely to both the modem module and to the telephone jack in the wall.
	Modem module is not securely attached to the bottom of the mobile computer.	Remove and re-attach the modem module. Ensure it is firmly attached on the bottom of the mobile computer.
	Communications software is not installed or configured properly.	Perform the mobile computer set up described in this guide.
	Problems in the telephone lines that prevent communication.	Connect a conventional telephone and dial the remote modem to verify the telephone lines are functioning properly. The remote modem should answer the call and emit answering tones. If not, contact the remote system administrator.
	Mobile computer's battery is low or discharged. Power to the modem is shut off if the battery is low.	Ensure that the mobile computer battery is fully charged. Use an external DC power adapter to recharge the battery.

Symptom	Possible Cause	Action
Dial-out fails.	Location setting is incorrect.	Verify Dialing Locations. Verify Dialing Patterns are correct for the current location. For example, enter 'G' in the 'For local calls, dial:' field to dial directly, or '9,G' if the telephone system requires '9' to be dialed first to access an outside line.
	Incorrect server phone number.	Verify the phone number connecting to in the Connecting dialog boxes.
	Pulse dialing not supported for the country.	Use a connection within a tone-dialing system.
	Dial tone detection not supported.	A different type of dial tone may be received as a result of the subscription service, such as a remote answering service. Disable dial tone detection on the modem by entering the initialization string "ATXO" in the Extra dial-string modem commands: text box on the Modem Settings window.

Regulatory Information

This guide applied to model number: MDM9001-C010R.

All Zebra 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.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.

Power Supply

✓ **NOTE** Use only an approved power supply (50-14000-148R) output rated 12 VDC and minimum 3.33 A. The power supply is certified to EN60950-1 with SELV outputs.

✓ **HINWEIS** Benutzen Sie nur eine genehmigt Stromversorgung (50-14000-148R) in den Ausgabe: 12 Vdc und minimum 3.33 A. Die Stromversorgung ist bescheinigt nach EN60950-1 mit SELV Ausgaben.

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 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.

Telecom Approval Warnings and Notices

This product contains Modem Type MCD1.

Connecting to the telephone network

A compliant telephone lead is required with RJ11 plug (line is on middle pair) for connection to modem, terminated with an appropriate and correctly wired local telecom connector compatible with the telephone network. Such a cable may be sourced from your local supplier. Alternatively compliant RJ11 plug to RJ11 plug cables may be used with a range of adapters for places such as Europe.



CAUTION To reduce risk of fire, use only No. 26 AWG or larger telecommunication line cord.

User and Service Access - No user service is intended and no part of the modem, other than the line connection plug, is accessible to users.

United States

Where this device contains a Zebra Technologies Corporation internal modem, this equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. A Supplier's Declaration of Conformity for the modem type may be obtained from <http://www.zebra.com/doc/> On the exterior of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

This equipment must be connected to the telephone network or premises wiring using a compatible modular jack (RJ11C) compliant with the applicable FCC Part 68 rules and requirements adopted by ACTA. A compliant telephone cord and modular plug must be used.

This equipment must not be used on party lines.

If your premises has specially wired alarm equipment connected to the telephone line, ensure the installation of this modem does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

Should you experience trouble with this equipment, please contact your facility's Technical or Systems Support first who will contact your nearest Zebra Customer Service Centre. If necessary, the Zebra Support Centre may be contacted at: 1-800-653-5350. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

If the modem causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the modem. If this happens the telephone company will provide advance notice so you may make any necessary modifications to maintain uninterrupted service.

Fax

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless it clearly contains a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.) In order to program this information into your fax/modem, you should consult documentation supplied with the necessary fax driver application software being used with the host mobile computer.

Canada

This equipment meets the applicable Industry Canada mobile computer Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation "IC:" before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

The Ringer Equivalence Number (REN) for this mobile computer equipment is 0.1. The REN assigned to each mobile computer equipment provides an indication of the maximum number of mobile computers allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

Marking and European Economic Area (EEA)

Statement of Compliance for Modems

Zebra hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directives 1999/5/EC, 2004/108/EC, 2006/95/EC and 2011/65/EU. Declaration of Conformities may be obtained from <http://www.zebra.com/doc/>

The modem is designed to interwork with the Public Switched Telephone Networks within the EEA and listed on the Declaration of Conformity.

Waste Electrical and Electronic Equipment (WEEE)

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

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

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

Български: За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Zebra за рециклиране. За информацията относно връщането на продукти, моля отидете на адрес:
<http://www.zebra.com/weee>.

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

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

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

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

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji należy zwrócić do firmy Zebra w celu ich utylizacji. Informacje na temat zwrotu produktów znajdują się na stronie internetowej <http://www.zebra.com/weee>.

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skončení jejich životnosti vrátit společnosti Zebra k recyklaci. Informace o způsobu vrácení produktu najdete na webové stránce: <http://www.zebra.com/weee>.

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Zebra'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: <http://www.zebra.com/weee>.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement termékét a Zebra vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalóként látogasson el a <http://www.zebra.com/weee> weboldalra.

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

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

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

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

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Zebra għar-riciklaġġ. Għal aktar taġħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: <http://www.zebra.com/weee>.

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

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

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

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti gražinti utilizuoti į kompaniją „Zebra“. Daugiau informacijos, kaip gražinti gaminį, rasite: <http://www.zebra.com/weee>.

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

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüşürme için Zebra'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: <http://www.zebra.com/weee>.

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 the Zebra Support at: <http://www.zebra.com/support>.

For the latest version of this guide go to: <http://www.zebra.com/support>.



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72-79790-03 Revision A - July 2015