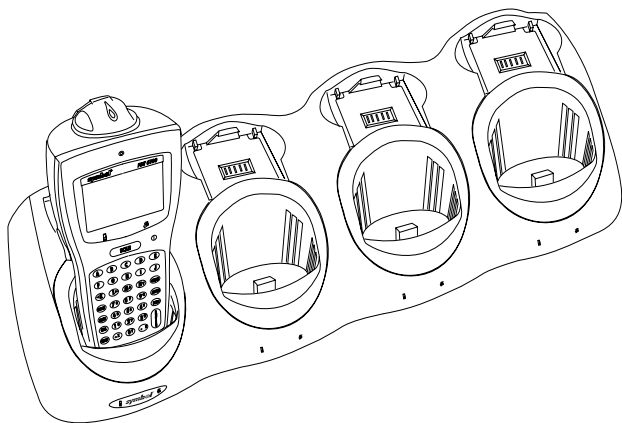
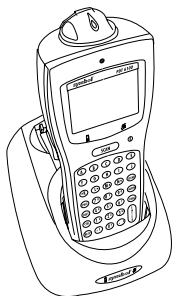


# QRG

C R D 6 1 0 0



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Symbol Technologies, Inc.  
One Symbol Plaza  
Holtsville, N.Y. 11742-1300  
<http://www.symbol.com>

#### Patents

This product is covered by one or more of the following U.S. and foreign Patents:

U.S. Patent No. 4,460,120; 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750;  
4,673,805; 4,736,095; 4,758,717; 4,816,660; 4,845,350; 4,896,026; 4,897,532;  
4,923,281; 4,933,538; 4,992,717; 5,015,833; 5,017,765; 5,021,641; 5,029,183;  
5,047,617; 5,103,461; 5,113,445; 5,130,520; 5,140,144; 5,142,550; 5,149,950;  
5,157,687; 5,168,148; 5,168,149; 5,180,904; 5,216,232; 5,229,591; 5,230,088;  
5,235,167; 5,243,655; 5,247,162; 5,250,791; 5,250,792; 5,260,553; 5,262,627;  
5,262,628; 5,266,787; 5,278,398; 5,280,162; 5,280,163; 5,280,164; 5,280,498;  
5,304,786; 5,304,788; 5,306,900; 5,321,246; 5,324,924; 5,337,361; 5,367,151;  
5,373,148; 5,378,882; 5,396,053; 5,396,055; 5,399,846; 5,408,081; 5,410,139;  
5,410,140; 5,412,198; 5,418,812; 5,420,411; 5,436,440; 5,444,231; 5,449,891;  
5,449,893; 5,468,949; 5,471,042; 5,478,998; 5,479,000; 5,479,002; 5,479,441;  
5,504,322; 5,519,577; 5,528,621; 5,532,469; 5,543,610; 5,545,889; 5,552,592;  
5,557,093; 5,578,810; 5,581,070; 5,589,679; 5,589,680; 5,608,202; 5,612,531;  
5,619,028; 5,627,359; 5,637,852; 5,664,229; 5,668,803; 5,675,139; 5,693,929;  
5,698,835; 5,705,800; 5,714,746; 5,723,851; 5,734,152; 5,734,153; 5,742,043;  
5,745,794; 5,754,587; 5,762,516; 5,763,863; 5,767,500; 5,789,728; 5,789,731;  
5,808,287; 5,811,785; 5,811,787; 5,815,811; 5,821,519; 5,821,520; 5,823,812;  
5,828,050; 5,850,078; 5,861,615; 5,874,720; 5,875,415; 5,900,617; 5,902,989;  
5,907,146; 5,912,450; 5,914,478; 5,917,173; 5,920,059; 5,923,025; 5,929,420;  
5,945,658; 5,945,659; 5,946,194; 5,959,285; 6,002,918; 6,021,947; 6,047,892;  
6,050,491; 6,053,413; 6,056,200; 6,065,678; 6,067,297; 6,068,190; D305,885;  
D341,584; D344,501; D359,483; D362,453; D363,700; D363,918; D370,478;  
D383,124; D391,250; D405,077; D406,581; D414,171; D414,172; D419,548;  
D423,468; D424,035.

Invention No. 55,358; 62,539; 69,060; 69,187 (Taiwan); No. 1,601,796; 1,907,875;  
1,955,269 (Japan).

European Patent 367,299; 414,281; 367,300; 367,298; UK 2,072,832; France 81/03938;  
Italy 1,138,713.

rev. 06/00

## **Introducción**

Esta guía presenta información sobre la instalación y la carga de la cuna CRD 6100-1030 de una ranura y de la cuna CRD 6100-4030 de cuatro ranuras. Las cunas se comunican mediante una interfaz RS-232 a un ordenador host. Las cunas también incluyen ranuras para baterías de repuesto para la carga de baterías adicionales.

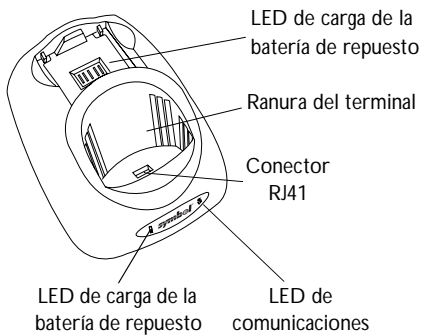
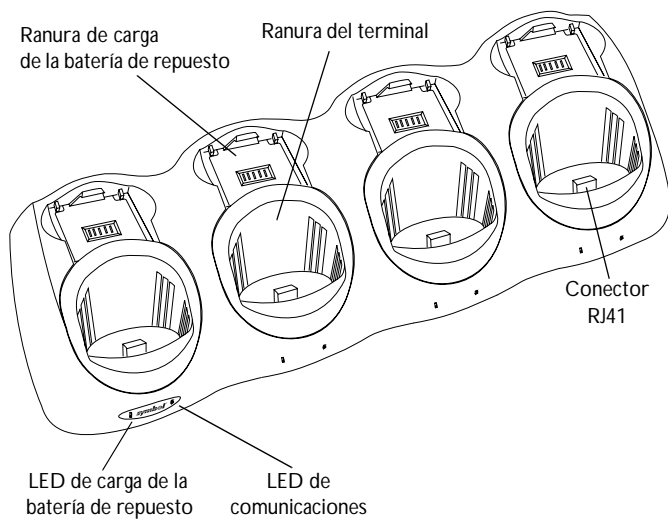
## **Equipamiento necesario para la instalación**

Verifique que tenga los siguientes componentes de la cuna, cables y otros juegos y accesorios antes de intentar conectar la cuna:

- 3 Cuna de una o cuatro ranuras, con ranura(s) de carga para la batería de repuesto
- 3 Cable de módem nulo RS-232, macho DB-25 a hembra DB-25 o macho DB-25 a hembra DB-9
- 3 Fuente de alimentación de CA para cuna de una ranura (n/p 50-14000-086) o de cuatro ranuras (n/p 50-14001-004)
- 3 Cable de alimentación adecuado.

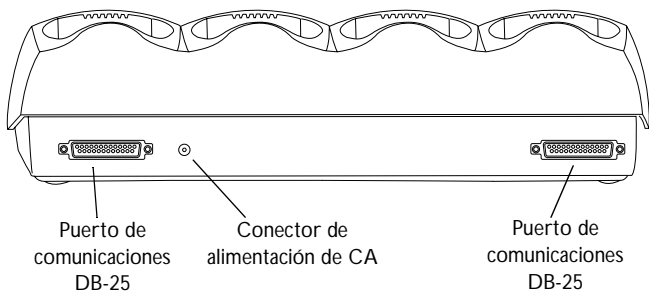
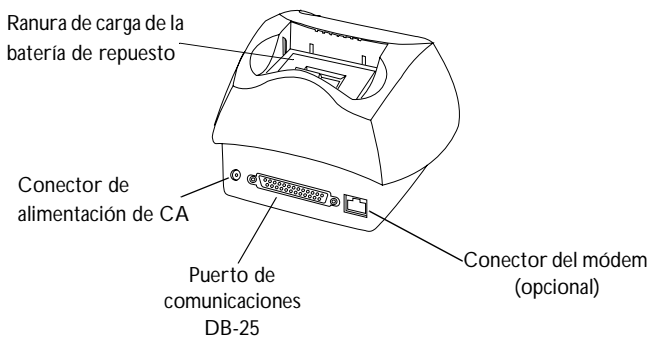
Conserve la caja de envío para el almacenaje o reenvío de la cuna. Compruebe que el equipamiento suministrado no presente daños. Si algún elemento falta o presenta daños, póngase en contacto inmediatamente con su representante autorizado de atención al cliente.

## Partes de la cuna



## Vista frontal

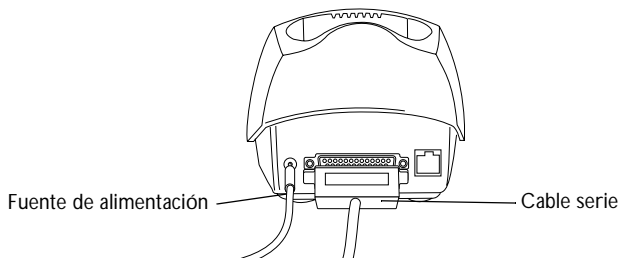
## Partes de la cuna



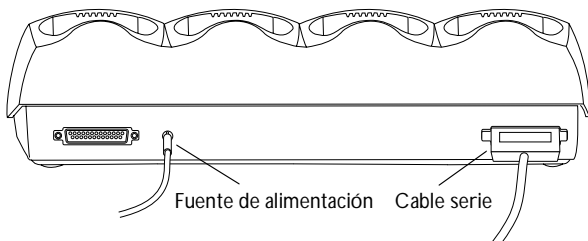
**Vista posterior**

## Conexión de los cables

Para conectar los cables de comunicaciones y la fuente de alimentación del CRD 6100:

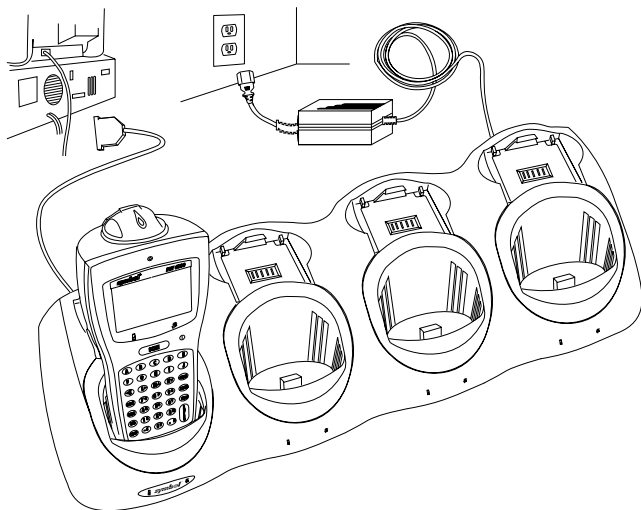


1. Enchufe el cable serie RS-232 en el puerto de comunicaciones situado en la parte posterior de la cuna (en la cuna de cuatro ranuras, el conector está en el lado derecho al mirar la parte posterior de la cuna).



2. Conecte el otro extremo del cable serie al puerto de comunicaciones del ordenador host.
3. Conecte el conector del cable de alimentación al puerto de alimentación de CA de la cuna.
4. Conecte el cable de alimentación a la fuente de alimentación.

5. Enchufe el cable de alimentación a una toma eléctrica estándar.



6. En la cuna de una ranura, el indicador de comunicación verde se encenderá durante unos cinco segundos y después se apagará.
7. En la cuna de cuatro ranuras, el indicador de comunicación verde se encenderá durante unos cinco segundos, destellará durante otros cinco segundos y después se apagará.

## Conexión del módem interno

Algunas cunas utilizan un módem interno opcional, con una velocidad de hasta 14.400 bps (con compresión de datos v.32 bis). Puede conectarse directamente a una línea telefónica mediante el puerto RJ-11 que se muestra en la ilustración.

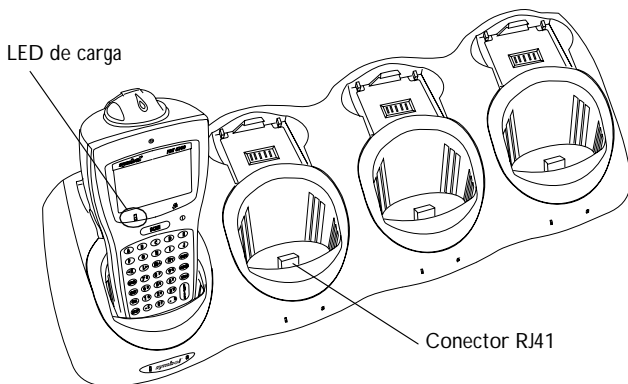
**Nota:** La cuna de cuatro ranuras **no** tiene módem interno.

Existen parámetros específicos de firmware que se utilizan para configurar el hardware y el software del módem, para que funcione correctamente y cumpla las normas de regulación. La aplicación del terminal puede controlar estos parámetros y permitir ver y modificar los parámetros según el país o región, marcado por pulsaciones o tonos, o tiempo de repetición de la llamada. La definición incorrecta de estos parámetros puede suponer el uso ilegal del módem y hacerlo funcionar de manera poco fiable. El programador de aplicaciones debe consultar los parámetros correctos en el Series 3000 Application Programmer's Reference Manual (Manual de referencia del programador de aplicaciones de la serie 3000).

Para comunicaciones serie, siga los pasos indicados para la cuna en serie.

## Colocación del terminal en la cuna

1. Fije el PDT 6100 en la ranura de la cuna. El puerto serie del PDT 6100 encaja en el conector RJ 41 situado en la parte inferior de la ranura de la cuna.
2. El LED de carga del PDT 6100 se ilumina en amarillo si se coloca correctamente y la cuna está conectada a la alimentación.



## Extracción del PDT 6100 de la cuna

Para extraer el terminal de la cuna, sujete el terminal por encima de los gatillos de lectura y tire de él.

## Carga de la batería

**Nota:** Cargue completamente la batería del PDT 6100 antes de utilizar el PDT 6100. Cargue la batería a una temperatura entre 0°C y 40°C (32°F y 104°F). La temperatura ambiente (23°C o 73,4°F) es ideal.

La batería NiMH de 1500 mAh comienza a recargarse automáticamente cuando el PDT 6100 se coloca en la cuna.

1. Coloque el PDT 6100 en la cuna.

El LED de carga del PDT 6100 se ilumina en amarillo cuando el terminal se coloca en la cuna. El LED se ilumina en amarillo cuando está cargando una batería descargada y cambia a verde sólido cuando la batería está completamente cargada.

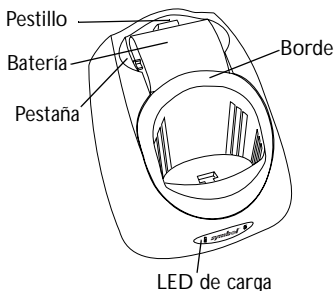
2. Deje el PDT 6100 en la cuna durante 2,5 horas para recargar una batería completamente descargada.

## Recarga de las baterías de repuesto

Para recargar una batería de repuesto en la cuna:

1. Inserte la batería de repuesto de lado, con los contactos hacia abajo, en la ranura para la batería de repuesto, con la pestaña mirando hacia el lado derecho o izquierdo de la cuna.
2. Alinee un lado de la batería bajo el borde del hueco de la cuna.

- Presione sobre el lado contrario de la batería hasta que se enganche el pestillo.



El LED de carga de la cuna destella en amarillo cuando la batería se coloca en la cuna. El LED se ilumina en amarillo sólido para indicar que la batería de repuesto se está cargando y cambia a verde cuando la batería está cargada. La batería de repuesto se recarga en 2,5 horas.

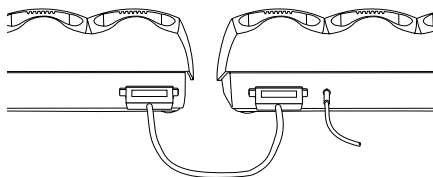
- Retire la batería de repuesto y colóquela en el PDT 6100, o déjela en la cuna para su almacenamiento temporal.

Para retirar la batería, sujétela por ambos lados y sáquela de la ranura de carga.

## Conexión a otras cunas

Pueden conectarse hasta 16 cunas de cuatro ranuras en serie utilizando un cable entre cunas RS-232 (n/p 50413). Si necesita un cable de mayor extensión para conectar las cunas, utilice el cable n/p 51349-00-00. Las cunas de una ranura no se pueden conectar entre sí.

Cada cuna debe tener su propia fuente de alimentación. Cualquier otro método de conexión de la alimentación no es seguro.



## R e f e r e n c i a   r á p i d a

1. Enchufe un extremo del cable entre cunas en el puerto de comunicaciones que se encuentra en la parte posterior de la cuna.
2. Enchufe el otro extremo del cable entre cunas en el puerto de comunicaciones que se encuentra junto al conector de alimentación en la parte posterior de la segunda cuna.
3. Conecte la fuente de alimentación a la segunda cuna tal como se describe en el apartado “Conexión de los cables” en la página 4.
4. Repita los pasos anteriores con cada cuna de cuatro ranuras adicional que desee conectar.

### Envío de datos a un host o a una impresora

1. Fije el PDT 6100 en un CRD 6100 conectado a un host o a una impresora.
2. Pulse la tecla adecuada en el PDT 6100, tal como se describe en la guía del usuario de la aplicación.
3. El LED de comunicaciones de la cuna se ilumina en verde cuando la comunicación está en curso.

### Solución de problemas

Síntoma	Causa posible	Acción
Los LED de la cuna no se encienden	La cuna no está conectada a la alimentación.	Conecte la cuna a una fuente de alimentación. Consulte <i>Conexión de los cables</i> en la página 4.
No existe comunicación entre el PDT 6100 y la cuna	El PDT 6100 no está fijado correctamente.	Verifique que el PDT 6100 esté bien introducido en la ranura de la cuna.

Síntoma	Causa posible	Acción
La batería NiMH recargable no se carga	El PDT 6100 se extrajo de la cuna antes de que la batería se cargara completamente.	Vuelva a colocar el PDT 6100 en la cuna e inicie la carga. La batería NiMH requiere entre 2 y 2,5 horas para cargarse del todo.
	Fallo de la batería.	Sustituya la batería.
	Carga de la batería a una temperatura fuera del rango de 0°C a 40°C.	Verifique que la temperatura ambiente esté entre 0°C y 40°C para cargar la batería.
La batería de repuesto no se carga	Batería retirada antes de estar completamente cargada.	Vuelva a colocar la batería en la ranura de carga de la batería de repuesto y comience la carga. La batería NiMH requiere entre 2 y 2,5 horas para cargarse del todo en la ranura de carga de la batería de repuesto.
	Fallo de la batería.	Sustituya la batería.
	La batería no está fijada correctamente.	Verifique que la batería esté colocada correctamente en la ranura de carga de la batería de repuesto.
No existe comunicación entre el host y la cuna	Los cables no están conectados correctamente.	Verifique que los cables estén correctamente conectados. Consulte <i>Conexión de los cables</i> en la página 4.
No se transmitieron datos al host o a la impresora, o los datos transmitidos estaban incompletos	El PDT 6100 se extrajo de la cuna antes de que finalizara la transmisión.	Vuelva a colocar el PDT 6100 en la cuna e inicie de nuevo la transmisión.

## Regulatory Information

### Radio Frequency Interference Requirements

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. 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 own expense.

However, there is no guarantee that interference will not occur in a particular installation. If the 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:

- Re-orient 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 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 Industry Canada Standard ICES-003. Cet appareil numérique de la classe B est conform à la norme NMB-003 d'Industrie Canada.

### CE Marking and European Union Compliance



Products intended for sale within the European Union are marked with the CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included:

#### *Applicable Directives*

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

#### *Applicable Standards*

- EN 55 022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information technology Equipment
- EN 50 082-1:1997 - Electromagnetic Compatibility - Generic Immunity Standard, Part 1: Residential, commercial, Light Industry
- IEC 1000-4-2(1995-01) - Electromagnetic compatibility (EMC) - Part 4:Testing and measurement techniques - Section 2: Electrostatic discharge immunity test.
- IEC 1000-4-3(1995-03) - Electromagnetic compatibility (EMC) - Part 4:Testing



and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test.

- IEC 1000-4-4(1995-01) - Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test.
- EN 60 950 + Amd 1 + Amd 2 - Safety of Information Technology Equipment Including Electrical Business Equipment

## **TELECOM APPROVAL WARNINGS AND NOTICES**

### **USA**

When supplied with an internal IM8 modem option, this equipment complies with Part 68 of the FCC rules. A label is located externally on the equipment that contains, among other information, the FCC certification number and Ringer Equivalence Number (REN=0.6) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the 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 is designed to be connected to the telephone network or premises wiring using a compatible modular jack (RJ11C) that is FCC Part 68 compliant. A FCC compliant telephone cord and modular plug must be used.

Should you experience trouble with this telephone equipment, please contact your facility's Technical or Systems Support first who will contact your nearest Symbol Customer Service Centre. If necessary, the Symbol Support Centre may be contacted at the following:

Symbol Support Center  
One Symbol Plaza  
Holtsville, NY 11705-1300  
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.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information.)

Your telephone company may discontinue your service if your equipment causes harm to the telephone network. They will notify you as soon as possible and if practical, in advance of disconnection. During notification, you will be informed of your right to file a complaint to the FCC if you believe it is necessary.

Occasionally, your telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the operation of your equipment. If so, you will be given advance notice of the change to give you an opportunity to maintain uninterrupted service.

# Q u i c k R e f e r e n c e

## **Canada**

The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.'

The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals 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 5.

## **Australia**

The Australian Ringer Equivalence Number (REN) of this device is 0.5. The REN value is a guide to the maximum number of telecommunications devices that can be connected together, in parallel, to one telephone line. The maximum permitted REN value is 3.0 and hence the sum REN value of all connected devices must not exceed 3.0.

## **Europe**

The equipment has been approved for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTN's provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Symbol Technologies declare under our sole responsibility that the IM8 Modem is designed to interwork with the following Public Switched Telephone Networks: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel (pending approval), Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland (see Note below), United Kingdom.

Note for Switzerland – Problems may be encountered due to Advice of Charge (AoC) tone bursts used for metering/ billing purposes. To avoid difficulties a cable or adapter containing an AoC 12kHz filter is necessary. In case of difficulty, please contact your equipment supplier for advice.



### **Parallel Equipment loading in Europe**

The Loading Factor (LF) is low at 18 Loading Units (LU) and should allow for the operation of several parallel connected equipment on the telephone line, should the application permit. The total loading of an installation can be obtained by adding the LU values of connected equipment. This can then be compared with the LF value that the telephone network can support as given by the operator of the telephone network. The total equipment LF should be less than the network LF to avoid risking a degradation in the equipment performance. (eg. 5 items similar to the IM8 modem specification of 18 LU will operate on a network terminating point that can support 90 LU.)

### **RF Devices**

Symbol's RF products are designed to be compliant with the rules and regulations in the locations into which they are sold and will be labeled as required. The majority of Symbol's RF devices are type approved and do not require the user to obtain license or authorization before using the equipment. Any changes or modifications to Symbol Technologies equipment not expressly approved by Symbol Technologies could void the user's authority to operate the equipment.

# Q u i c k R e f e r e n c e

C R D 6 1 0 0  
Q R G

## Warranty

Symbol Technologies, Inc. ("Symbol") manufactures its hardware products in accordance with industry-standard practices. Symbol warrants that for a period of twelve (12) months from date of shipment, products will be free from defects in materials and workmanship.

This warranty is provided to the original owner only and is not transferable to any third party. It shall not apply to any product (i) which has been repaired or altered unless done or approved by Symbol, (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Symbol, (iii) which has been subjected to unusual physical or electrical stress, misuse, abuse, power shortage, negligence or accident or (iv) which has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of customer and is not covered under this warranty.

Wear items and accessories having a Symbol serial number, will carry a 90-day limited warranty. Non-serialized items will carry a 30-day limited warranty.

### ***Warranty Coverage and Procedure***

During the warranty period, Symbol will repair or replace defective products returned to Symbol's manufacturing plant in the US. For warranty service in North America, call the Symbol Support Center at 1-800-653-5350. International customers should contact the local Symbol office or support center. If warranty service is required, Symbol will issue a Return Material Authorization Number. Products must be shipped in the original or comparable packaging, shipping and insurance charges prepaid. Symbol will ship the repaired or replacement product freight and insurance prepaid in North America. Shipments from the US or other locations will be made F.O.B. Symbol's manufacturing plant.

Symbol will use new or refurbished parts at its discretion and will own all parts removed from repaired products. Customer will pay for the replacement product in case it does not return the replaced product to Symbol within 3 days of receipt of the replacement product. The process for return and customer's charges will be in accordance with Symbol's Exchange Policy in effect at the time of the exchange.

Customer accepts full responsibility for its software and data including the appropriate backup thereof.

Repair or replacement of a product during warranty will not extend the original warranty term. Symbol's Customer Service organization offers an array of service plans, such as on-site, depot, or phone support, that can be implemented to meet customer's special operational requirements and are available at a substantial discount during warranty period.

### ***General***

Except for the warranties stated above, Symbol disclaims all warranties, express or implied, on products furnished hereunder, including without limitation implied warranties of merchantability and fitness for a particular purpose. The stated express warranties are in lieu of all obligations or liabilities on part of Symbol for damages, including without limitation, special, indirect, or consequential damages arising out of or in connection with the use or performance of the product.

Seller's liability for damages to buyer or others resulting from the use of any product, shall in no way exceed the purchase price of said product, except in instances of injury to persons or property.

Some states (or jurisdictions) do not allow the exclusion or limitation of incidental or consequential damages, so the proceeding exclusion or limitation may not apply to you.

## **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 Systems Support. If there is a problem with the equipment, they will contact the Symbol Support Center:

United States	1-800-653-5350	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	337-6588
Australia	1-800-672-906	Austria	1-505-5794
Denmark	7020-1718	Finland	9 5407 580
France	01-40-96-52-21	Germany	6074-49020
Italy	2-484441	Mexico	5-520-1835
Netherlands	315-271700	Norway	66810600
South Africa	11-4405668	Spain	9-1-320-39-09
Sweden	84452900		
Latin America Sales Support		1-800-347-0178 Inside US	
		+1-561-483-1275 Outside US	
Europe/Mid-East Distributor Operations		Contact local distributor or call	
		+44 208 945 7360	



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