



## Skorpio™/Skorpio-GUN™





Datalogic Mobile S.r.l.  
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Bologna - Italy

Datalogic Skorpio™ and Skorpio-GUN™ - User's Manual

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# REFERENCES

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## CONVENTIONS

This manual uses the following conventions:

If not otherwise specified, the term Datalogic Skorpio™ refers to both Datalogic Skorpio™ and Skorpio-GUN™ mobile computers.

“User” refers to anyone using a Datalogic Skorpio™ mobile computer.

“Mobile computer” refers to Datalogic Skorpio™ mobile computer.

“You” refers to the System Administrator or Technical Support person using this manual to install, configure, operate, maintain or troubleshoot a Datalogic Skorpio™ mobile computer.

## REFERENCE DOCUMENTATION

For further information regarding Datalogic Skorpio™ refer to the SDK Help on-Line.

## SERVICES AND SUPPORT

Datalogic provides several services as well as technical support through its website. Log on to [www.mobile.datalogic.com](http://www.mobile.datalogic.com) and click on the [links](#) indicated for further information including:

- **PRODUCTS**

Search through the links to arrive at your product page where you can download specific **Manuals** and **Software & Utilities**

- **SERVICES & SUPPORT**

- **Datalogic Services** Warranty Extensions and Maintenance Agreements

- **Authorised Repair Centres**

- **CONTACT US**

E-mail form and listing of Datalogic Subsidiaries

# SAFETY REGULATIONS

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**NOTE**

*Read this manual carefully before performing any type of connection to the Datalogic Skorpio™ mobile computer.  
The user is responsible for any damages caused by incorrect use of the equipment or by inobservance of the indication supplied in this manual.*

## GENERAL SAFETY RULES

- Use only the components supplied by the manufacturer for the specific Datalogic Skorpio™ being used.
- Do not attempt to disassemble the Datalogic Skorpio™ mobile computer, as it does not contain parts that can be repaired by the user. Any tampering will invalidate the warranty.
- When replacing the battery pack or at the end of the operative life of the Datalogic Skorpio™ mobile computer, disposal must be performed in compliance with the laws in force.
- Before using the devices and the battery packs, read par. 4.2.
- Do not submerge the Datalogic Skorpio™ in liquid products.
- For further information, refer to this manual and to the Datalogic Mobile web site: [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

## BLUETOOTH® APPROVAL

This product is equipped with the following certified Bluetooth module:

Product Name: Datalogic CE BLUETOOTH SUBSYSTEM

Bluetooth ID: B03071

Product ID: DLBTCE-02

## POWER SUPPLY

This device is intended to be supplied by a UL Listed/CSA Certified Power Unit marked "Class 2" or LPS power source rated 5 V DC, minimum 2 A which supplies power directly to the Mini USB connector.

## LASER SAFETY

The laser light is visible to the human eye and is emitted from the window indicated in the figure.

### Datalogic Skorpio™ Models



# Datalogic Skorpio-GUN™ Models



  
 S/N X00X00000 P/N 94200000  
 Model: DL-SKORPIO-X 000-000  
 Manufactured: Nov 2007  

  
 N2468  
 Datalogic Mobile S.r.l. Via S. Vitalino 13  
 40012 Lippo di Calderara - Bologna - Italy  
 Made in Italy



**This product complies with 21 CFR Subchapter J CLASS 1 LED PRODUCT**



**CAUTION-CLASS 2 LASER LIGHT WHEN OPEN - DO NOT STARE INTO BEAM**  
**AVOID EXPOSURE LASER LIGHT IS EMITTED FROM THIS APERTURE**  
**LASER LIGHT - DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT MAX. OUTPUT RADIATION: 1.7mW EMITTED WAVE LENGTH 630-680 nm EN60825-1:2001**

I	D	F	E
La luce laser è visibile all'occhio umano e viene emessa dalla finestra indicata nella figura.	Die Laserstrahlung ist für das menschliche Auge sichtbar und wird am Strahlaustrittsfenster ausgesendet (siehe Bild).	Le rayon laser est visible à l'oeil nu et il est émis par la fenêtre désignée sur l'illustration dans la figure.	La luz láser es visible al ojo humano y es emitida por la ventana indicada en la figura.
<b>LUCE LASER</b> <b>NON FISSARE IL FASCIO</b> <b>APPARECCHIO LASER DI</b> <b>CLASSE 2</b> <b>MINIMA POTENZA DI</b> <b>USCITA: 1.7mW</b> <b>LUNGHEZZA D'ONDA</b> <b>EMESSA: 650nm</b> <b>CONFORME A EN 60825-1</b> <b>(2001)</b>	<b>LASERSTRAHLUNG</b> <b>NICHT IN DER STRAHL</b> <b>BLINKEN</b> <b>PRODUKT DER</b> <b>LASERKLASSE 2</b> <b>MAXIMALE</b> <b>AUSGANGLEISTUNG:</b> <b>1.7mW</b> <b>WELLENLÄNGE: 650nm</b> <b>ENTSPR. EN 60825-1</b> <b>(2001)</b>	<b>RAYON LASER</b> <b>EVITER DE REGARDER</b> <b>LE RAYON</b> <b>APPAREIL LASER DE</b> <b>CLASSE 2</b> <b>PUISSANCE DE SORTIE:</b> <b>1.7mW</b> <b>LONGUER D'ONDE EMISE:</b> <b>650nm</b> <b>CONFORME A EN 60825-1</b> <b>(2001)</b>	<b>RAYO LÁSER</b> <b>NO MIRAR FIJO EL RAYO</b> <b>APARATO LÁSER DE</b> <b>CLASE 2</b> <b>MÁXIMA POTENCIA DE</b> <b>SALIDA: 1.7mW</b> <b>LONGITUD DE ONDA</b> <b>EMITIDA: 650nm</b> <b>CONFORME A EN 60825-1</b> <b>(2001)</b>

## ENGLISH

The following information is provided to comply with the rules imposed by international authorities and refers to the correct use of your mobile computer.

### STANDARD LASER SAFETY REGULATIONS

This product conforms to the applicable requirements of both CDRH 21 CFR 1040 Subchapter J and EN 60825-1:2001 at the date of manufacture.

For installation, use and maintenance, it is not necessary to open the device.



**CAUTION**

*Do not attempt to open or otherwise service any components in the optics cavity. Opening or servicing any part of the optics cavity by unauthorized personnel may violate laser safety regulations. The optics system is a factory only repair item.*



**CAUTION**

*Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light.*

The product utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.



**CAUTION**

*Use of optical systems with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, eye glasses and magnifying glasses.*

## ITALIANO

Le seguenti informazioni vengono fornite dietro direttive delle autorità internazionali e si riferiscono all'uso corretto del terminale.

### NORMATIVE STANDARD PER LA SICUREZZA LASER

Questo prodotto risulta conforme alle normative vigenti sulla sicurezza laser alla data di produzione: CDRH 21 CFR 1040 sezione J e EN 60825-1:2001.

Non si rende mai necessario aprire l'apparecchio per motivi di installazione, utilizzo o manutenzione.



**CAUTION**

*Non tentare di accedere allo scomparto contenete i componenti ottici o di farne la manutenzione.*

*L'apertura dello scomparto, o la manutenzione di qualsiasi parte ottica da parte di personale non autorizzato, potrebbe violare le norme della sicurezza. Il sistema ottico può essere riparato solamente alla fabbrica.*



**CAUTION**

*L'utilizzo di procedure o regolazioni differenti da quelle descritte nella documentazione può provocare un'esposizione pericolosa a luce laser visibile.*

Il prodotto utilizza un diodo laser a bassa potenza. Sebbene non siano noti danni riportati dall'occhio umano in seguito ad una esposizione di breve durata, evitare di fissare il raggio laser così come si eviterebbe qualsiasi altra sorgente di luminosità intensa, ad esempio il sole. Evitare inoltre di dirigere il raggio laser negli occhi di un osservatore, anche attraverso superfici riflettenti come gli specchi.



**CAUTION**

*L'uso di strumenti ottici assieme allo scanner può aumentare il pericolo di danno agli occhi. Tali strumenti ottici includono cannocchiali, microscopi, occhiali e lenti di ingrandimento.*

## DEUTSCH

Die folgenden Informationen stimmen mit den Sicherheitshinweisen überein, die von internationalen Behörden auferlegt wurden, und sie beziehen sich auf den korrekten Gebrauch vom Terminal.

### NORM FÜR DIE LASERSICHERHEIT

Dies Produkt entspricht am Tag der Herstellung den gültigen EN 60825-1:2001 und CDRH 21 CFR 1040 Subchapter J Normen für die Lasersicherheit.

Es ist nicht notwendig, das Gerät wegen Betrieb oder Installations-, und Wartungsarbeiten zu öffnen.



**CAUTION**

*Unter keinen Umständen darf versucht werden, die Komponenten im Optikhohlraum zu öffnen oder auf irgendwelche andere Weise zu warten. Das Öffnen bzw. Warten der Komponenten im Optikhohlraum durch unbefugtes Personal verstößt gegen die Laser-Sicherheitsbestimmungen. Das Optiksystm darf nur werkseitig repariert werden.*



**CAUTION**

*Jegliche Änderungen am Gerät sowie Vorgehensweisen, die nicht in dieser Betriebsanleitung beschrieben werden, können ein gefährliches Laserlicht verursachen.*

Der Produkt benutzt eine Laserdiode. Obwohl zur Zeit keine Augenschäden von kurzen Einstrahlungen bekannt sind, sollten Sie es vermeiden für längere Zeit in den Laserstrahl zu schauen, genauso wenig wie in starke Lichtquellen (z.B. die Sonne). Vermeiden Sie es, den Laserstrahl weder gegen die Augen eines Beobachters, noch gegen reflektierende Oberflächen zu richten.



**CAUTION**

*Die Verwendung von Optiksystmen mit diesem Scanner erhöht die Gefahr einer Augenbeschädigung. Zu optischen Instrumenten gehören unter anderem Ferngläser, Mikroskope, Brillen und Vergrößerungsgläser.*

## FRANÇAIS

Les informations suivantes sont fournies selon les règles fixées par les autorités internationales et se réfèrent à une correcte utilisation du terminal.

### NORMES DE SECURITE LASER

Ce produit est conforme aux normes de sécurité laser en vigueur à sa date de fabrication: CDRH 21 CFR 1040 sous-chapitre J et EN 60825-1:2001.

Il n'est pas nécessaire d'ouvrir l'appareil pour l'installation, l'utilisation ou l'entretien.



**CAUTION**

*Ne pas essayer d'ouvrir ou de réparer les composants de la cavité optique. L'ouverture de la cavité optique ou la réparation de ses composants par une personne non qualifiée peut entraîner le nonrespect des règles de sécurité relatives au laser. Le système optique ne peut être réparé qu'en usine.*



**CAUTION**

*L'utilisation de procédures ou réglages différents de ceux donnés ici peut entraîner une dangereuse exposition à lumière laser visible.*

Le produit utilise une diode laser. Aucun dommage aux yeux humains n'a été constaté à la suite d'une exposition au rayon laser. Eviter de regarder fixement le rayon, comme toute autre source lumineuse intense telle que le soleil. Eviter aussi de diriger le rayon vers les yeux d'un observateur, même à travers des surfaces réfléchissantes (miroirs, par exemple).



**CAUTION**

*L'utilisation d'instruments optiques avec le scanneur augmente le danger pour les yeux. Les instruments optiques comprennent les jumelles, les microscopes, les lunettes et les verres grossissants.*

## ESPAÑOL

Las informaciones siguientes son presentadas en conformidad con las disposiciones de las autoridades internacionales y se refieren al uso correcto del terminal.

### NORMATIVAS ESTÁNDAR PARA LA SEGURIDAD LÁSER

Este aparato resulta conforme a las normativas vigentes de seguridad láser a la fecha de producción: CDRH 21 CFR 1040 Sección J y EN 60825-1:2001.

No es necesario abrir el aparato para la instalación, la utilización o la manutención.



**CAUTION**

*No intente abrir o de ninguna manera dar servicio a ninguno de los componentes del receptáculo óptico. Abrir o dar servicio a las piezas del receptáculo óptico por parte del personal no autorizado podría ser una violación a los reglamentos de seguridad. El sistema óptico se puede reparar en la fábrica solamente.*



**CAUTION**

*La utilización de procedimientos o regulaciones diferentes de aquellas descritas en la documentación puede causar una exposición peligrosa a la luz láser visible.*

El aparato utiliza un diodo láser a baja potencia. No son notorios daños a los ojos humanos a consecuencia de una exposición de corta duración. Eviten de mirar fijo el rayo láser así como evitarían cualquiera otra fuente de luminosidad intensa, por ejemplo el sol. Además, eviten de dirigir el rayo láser hacia los ojos de un observador, también a través de superficies reflectantes como los espejos.



**CAUTION**

*El uso de sistemas ópticos con el escáner aumentará el riesgo de daños oculares. Los instrumentos ópticos incluyen binoculares, microscopios, lentes y lupas.*

## **LED CLASS**

According to EN60825-1:2001, the Datalogic Skorpio™ models which use the good read spot LED are also CLASS 1 LED PRODUCTS.

APPARECCHIO LED CLASSE 1  
PRODUKT LED KLASSE 1

PRODUIT LED DE CLASSE 1  
PRODUCTO LED DE CLASE 1

## **RADIO COMPLIANCE**

In radio systems configured with mobile computers and access points, the frequencies to be used must be allowed by the spectrum authorities of the specific country in which the installation takes place. Be absolutely sure that the system frequencies are correctly set to be compliant with the spectrum requirements of the country.

The Radio modules used in this product automatically adapt to the frequencies set by the system and do not require any parameter settings.

The following shows the correspondence between the Datalogic Skorpio™ models and the Radio modules:

- Datalogic Skorpio™ 5XX-XXX 802.11b (Wi-Fi) radio card (Datalogic Skorpio™ models only)
- Datalogic Skorpio™ 7XX-XXX 802.11b/g (Wi-Fi) radio card

## Information for the User

### ENGLISH

Contact the competent authority responsible for the management of radio frequency devices of your country to verify any possible restrictions or licenses required. Refer to the web site <http://europa.eu.int/comm/enterprise/rte/spectr.htm> for further information.

### ITALIANO

Contatta l'autorità competente per la gestione degli apparati a radio frequenza del tuo paese, per verificare eventuali restrizioni o licenze. Ulteriori informazioni sono disponibili sul sito:  
<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

### FRANÇAIS

Contactez l'autorité compétente en la gestion des appareils à radio fréquence de votre pays pour vérifier d'éventuelles restrictions ou licences. Pour tout renseignement vous pouvez vous adresser au site web:  
<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

### DEUTSCH

Wenden Sie sich an die für Radiofrequenzgeräte zuständige Behörde Ihres Landes, um zu prüfen ob es Einschränkungen gibt, oder eine Lizenz erforderlich ist. Weitere Informationen finden Sie auf der Web Seite:  
<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

### ESPAÑOL

Contacta la autoridad competente para la gestión de los dispositivos de radio frecuencia de tu país, para verificar cualesquiera restricciones o licencias posibles requerida. Además se puede encontrar mas información en el sitio web:  
<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.



## **FCC COMPLIANCE**

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

This device has been tested and found to comply with the limits for a CLASS A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC ID U4G0020.

All 5XX-XXX Wi-Fi models are not FCC certified (Datalogic Skorpio™ models only).  
All 7XX-XXX Wi-Fi models contain FCC ID TWG-SDCCF10G.

## **SAR COMPLIANCE**

This product has been tested and found to comply with the following standards:

- OET BULLETIN 65 SUPPLEMENT C: evaluating compliance with FCC guidelines for human exposure to radio frequency electromagnetic fields.
- Australian Radiation Protection And Nuclear Safety Agency (ARPANSA): radiation protection series publication No. 3: maximum exposure levels to radio frequency fields 3 KHz TO 300 GHZ.
- EN 50392:2004: generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz- 300 GHZ).

## PATENTS

This product is covered by one or more of the following patents:

U.S. patents: 5,992,740; 6,808,114 B1; 6,997,385 B2; 7,387,246 B2.

European patents: 681,257 B1; 789,315 B1; 1,128,315 B1; 1,396,811 B1.

Additional patents pending.

## WEEE COMPLIANCE



### Informazione degli utenti ai sensi della Direttiva Europea 2002/96/EC

L'apparecchiatura che riporta il simbolo del bidone barrato deve essere smaltita, alla fine della sua vita utile, separatamente dai rifiuti urbani.

Smaltire l'apparecchiatura in conformità alla presente Direttiva consente di:

- evitare possibili conseguenze negative per l'ambiente e per la salute umana che potrebbero invece essere causati dall'errato smaltimento dello stesso;
- recuperare materiali di cui è composto al fine di ottenere un importante risparmio di energia e di risorse.

Per maggiori dettagli sulle modalità di smaltimento, contattare il Fornitore dal quale è stata acquistata l'apparecchiatura o consultare la sezione dedicata sul sito [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

### Information for the user in accordance with the European Commission Directive 2002/96/EC

At the end of its useful life, the product marked with the crossed out wheeled wastebin must be disposed of separately from urban waste.

Disposing of the product according to this Directive:

- avoids potentially negative consequences to the environment and human health which otherwise could be caused by incorrect disposal
- enables the recovery of materials to obtain a significant savings of energy and resources.

For more detailed information about disposal, contact the supplier that provided you with the product in question or consult the dedicated section at the website [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

### **Information aux utilisateurs concernant la Directive Européenne 2002/96/EC**

Au terme de sa vie utile, le produit qui porte le symbole d'un caisson à ordures barré ne doit pas être éliminé avec les déchets urbains.

Éliminer ce produit selon cette Directive permet de:

- éviter les retombées négatives pour l'environnement et la santé dérivant d'une élimination incorrecte
- récupérer les matériaux dans le but d'une économie importante en termes d'énergie et de ressources

Pour obtenir des informations complémentaires concernant l'élimination, veuillez contacter le fournisseur auprès duquel vous avez acheté le produit ou consulter la section consacrée au site Web [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

### **Información para el usuario de acuerdo con la Directiva Europea 2002/96/CE**

Al final de su vida útil, el producto marcado con un símbolo de contenedor de basura móvil tachado no debe eliminarse junto a los desechos urbanos.

Eliminar este producto de acuerdo con la Directiva permite de:

- evitar posibles consecuencias negativas para el medio ambiente y la salud derivadas de una eliminación inadecuada
- recuperar los materiales obteniendo así un ahorro importante de energía y recursos

Para obtener una información más detallada sobre la eliminación, por favor, póngase en contacto con el proveedor donde lo compró o consultar la sección dedicada en el Web site [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

### **Benutzerinformation bezüglich Richtlinie 2002/96/EC der europäischen Kommission**

Am Ende des Gerätelebenszyklus darf das Produkt nicht über den städtischen Hausmüll entsorgt werden. Eine entsprechende Mülltrennung ist erforderlich.

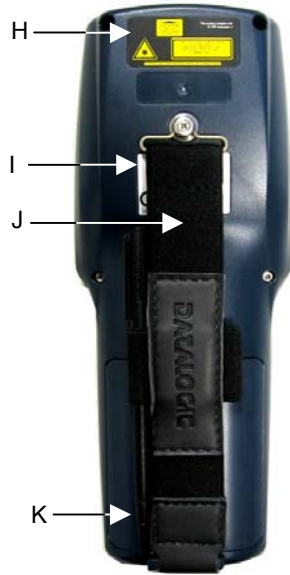
Beseitigung des Produkts entsprechend der Richtlinie:

- verhindert negative Auswirkungen für die Umwelt und die Gesundheit der Menschen
- ermöglicht die Wiederverwendung der Materialien und spart somit Energie und Ressourcen

Weitere Informationen zu dieser Richtlinie erhalten sie von ihrem Lieferanten über den sie das Produkt erworben haben, oder besuchen sie unsere Homepage unter [www.mobile.datalogic.com](http://www.mobile.datalogic.com).

# GENERAL VIEW

## Datalogic Skorpio™ Models



- A) Transfective display
- B) User programmable LED
- C) Speaker
- D) Charging status and battery low warning LED
- E) Scan key

- F) Keyboard
- G) Microphone
- H) Laser safety label
- I) Product label
- J) Adjustable elastic strap with stylus holders
- K) Battery pack



- L) Data Capture/Laser Output Window
- M) Mini USB connector

- N) RS232/USB Communication /Charger pins

## Datalogic Skorpio-GUN™ Models



- |  |                                     |
|--|-------------------------------------|
| A) Transfective display                        | F) Keyboard                         |
| B) User programmable LED                       | G) Microphone                       |
| C) Speaker                                     | H) Battery pack                     |
| D) Charging status and battery low warning LED | I) Laser safety label               |
| E) Scan key                                    | J) Data Capture/Laser Output Window |
|  | K) Trigger Scan Key                 |



- |                       |  |
|-----------------------|--|
| L) Mini USB connector | M) RS232/USB Communication /Charger pins |
|-----------------------|--|



# 1 INTRODUCTION

---

## 1.1 DATALOGIC SKORPIO™ DESCRIPTION

### 1.1.1 Datalogic Skorpio™

Datalogic Skorpio™ is a rugged mobile computer particularly suitable for mobile commerce solutions in the retail environment, both on store shelves and in the stock room.

Thanks to one of the best ergonomics ever seen on the market, Datalogic Skorpio™ reduces operator fatigue with no compromise in terms of reliability and robustness, resisting harsh environments, multiple drops, strong shocks and repetitive tumbles.

Datalogic Skorpio™ offers the unique feature of integrated data capture technology combined with “green spot” feedback (Datalogic patent), providing a “good read” green dot directly on the code, where the operator usually tends to be looking.

Datalogic Skorpio™ system architecture is based on the Intel X-Scale PXA-270 series processors coupled with the Windows CE 5.0 and the Windows Mobile 6.1 operating systems. It is ready to satisfy the most demanding customer needs (i.e. expandable memory thanks to the Mini Secure Digital standard slot).

Its wireless communication capabilities (Bluetooth®, Wi-Fi) enable fast transactions and complete interaction with the information system, as well as wearable peripherals, while its long lasting Li-ION batteries grant full shift coverage in terms of autonomy.

Furthermore, its large high visibility color graphic display with touch screen helps users work more efficiently, while the availability of two different keyboards - 38-key alphanumeric for a complete input and the 28-key numeric for simplified applications - allows data, codes and descriptions to be inserted very quickly.

Datalogic Skorpio™ is able to fulfill 100% of traditional text-based applications (i.e. terminal emulation, through the Wavelink Terminal Emulator software client) as well as the most modern Web-based solutions (i.e. exploiting Microsoft Internet Explorer through the Datalogic Desktop Utility).

Developers can create and deploy single or multiple data collection applications rapidly exploiting the MCL Collection, while IT managers can centralize the management of mobile devices revising configurations, synchronizing software and updating firmware and drivers remotely and seamlessly thanks to the Wavelink Avalanche software.

Datalogic Skorpio™ offers retailers the best mobile commerce solution to gain the greatest benefit in the least time for those “selling and serving on the move”!

### **1.1.2 Datalogic Skorpio-GUN™**

Datalogic Skorpio-GUN™ is a compact, lightweight and robust pistol grip mobile computer, particularly suitable for warehousing solutions and bar code scanning intensive applications, especially in the retail environment.

Datalogic Skorpio-GUN™ does not compromise in reliability and ruggedness. It is designed for use in hostile environments and can resist multiple drops, repeated knocks and accidental bumps.

Excellent ergonomics and lightweight make the operator’s job less tiring, while its long lasting Li-ION batteries grant full shift coverage in terms of autonomy.

The powerful laser reader combined with a “green spot” (Datalogic patent) for good read feedback directly on the code simplify the operator’s activities, while the Long Range reading option allows codes to be read from near contact to several meter distances.

Datalogic Skorpio-GUN™ system architecture is based on the Intel X-Scale PXA-270 series processors coupled with the Windows CE 5.0 and the Windows Mobile 6.1 operating systems.

Its wireless communication capabilities (Bluetooth®, Wi-Fi® certified 802.11b/g) enable fast transactions and complete interaction with information systems including the newest RF security protocols such as WPA™ and WPA2™.

Datalogic Skorpio-GUN™ large high visibility color graphic display with touch screen helps users work more efficiently, while the availability of two different keyboards - 38-key alphanumeric for a complete input and the 28-key numeric for simplified applications - allows data, codes and descriptions to be inserted very quickly.

Datalogic Skorpio™ is able to fulfill 100% of traditional text-based applications (i.e. terminal emulation, through the Wavelink Terminal Emulator software client) as well as the most modern Web-based solutions (i.e. exploiting Microsoft Internet Explorer through the Datalogic Desktop Utility).

Developers can create and deploy single or multiple data collection applications rapidly exploiting MCL Collection™, while IT managers can centralize mobile device management by revising configurations, synchronizing software and updating firmware and drivers remotely and seamlessly thanks to the Wavelink Avalanche software.

Datalogic Skorpio-GUN™ responds to market needs for a device with a pistol grip, which is light and well balanced, compact and robust, with the latest generation of hardware and software and wireless communication.

## 1.2 AVAILABLE MODELS

The brand new Datalogic Skorpio™ is available in different models depending on the options it is equipped with. Options are listed below:

- communication options: Wi-Fi 802.11b/g, Bluetooth®
- capture options: Miniature Laser Modules, Long Range Modules (Datalogic Skorpio-GUN™ models only)

For further details about the Datalogic Skorpio™ models refer to the web site: <http://www.mobile.datalogic.com>.

## 1.3 PACKAGE CONTENTS

The Datalogic Skorpio™ package contains:

- 1 Datalogic Skorpio™ mobile computer
- 1 CD-ROM Datalogic SDK
- 1 CD-ROM Getting Started Disk only for Windows Mobile
- 1 stylus
- 1 user's manual
- 1 rechargeable battery pack
- 1 elastic strap with stylus holder
- 1 belt clip
- 1 belt clip pivot

The Datalogic Skorpio-GUN™ package contains:

- 1 Datalogic Skorpio-GUN™ mobile computer
- 1 CD-ROM Datalogic SDK
- 1 CD-ROM Getting Started Disk only for Windows Mobile
- 1 stylus
- 1 stylus cord (small)
- 1 wrist strap
- 1 user's manual
- 1 rechargeable battery pack

Other accessories necessary for the Datalogic Skorpio™ connection to the host computer and to the network, must be ordered separately: the cradle, power supply, and one or more connection cables.

Remove all the components from their packaging; check their integrity and congruity with the packing documents.

**CAUTION**

*Keep the original packaging for use when sending products to the technical assistance center. Damage caused by improper packaging is not covered under the warranty.*

**NOTE**

*Rechargeable battery packs are not initially charged. Therefore the first operation to perform is to charge them. See paragraph 4.1.*

## 1.4 INSERTING MINI SD CARD

Datalogic Skorpio™ provides the possibility to add a mini storage disk to increase the on-board memory capacity. To access the Mini SD card slot and to insert the card, proceed as follows:

- 1a. Turn off the Datalogic Skorpio™ and remove the battery pack, by turning its lock screw to the open position (horizontal) and pulling the lock runner up.



- 1b. Turn off the Datalogic Skorpio-GUN™ and remove the battery pack, by pulling the battery latch down.



2. Remove the Mini SD card slot's protective rubber cover.



3. Insert the card with the written part upward (as shown in the figure) and push it in, aided by the stylus, until it clicks into place.

To recognize the card simply turn off and turn on the Datalogic Skorpio™. See par. 3.5.



To remove the Mini SD card, just push it toward the inside, aided by the stylus, until it clicks; a spring system will return it out.

**CAUTION**

*Follow proper ESD precautions to avoid damaging the SD. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.*

*Do not force the card. If you feel resistance, remove the card, check the orientation, and reinsert it.*

*Do not use the SD card slot for any other accessories.*

## 1.5 USING THE BELT CLIP

To use the belt clip (in Datalogic Skorpio™ models only), proceed as follows:

1. Remove the elastic strap and unscrew the strap pivot.



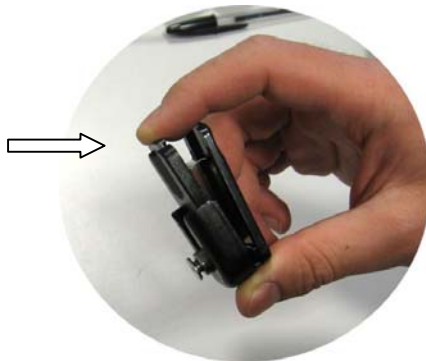
2. Screw the belt clip pivot on the terminal by using the fixing screw.



3. Insert the terminal in the belt clip by sliding the belt clip pivot into the belt clip until it clicks into place.



4. To release the terminal, press the belt clip unlock button.



## 1.6 STYLUS HOLDER

The Stylus holder is located in the handle of the Datalogic Skorpio-GUN™ models only:



## 1.7 ATTACHING THE WRIST STRAP

Attach the Wrist Strap (in Datalogic Skorpio-GUN™ models only) as shown in the figures below:



1



2



3

## 1.8 ACCESSORIES

### ❑ Cradles

94A151117 Datalogic Skorpio™ Single Cradle Desk for USB and RS232 communication with spare battery charger

94A151118 Datalogic Skorpio™ Single Cradle Ethernet for USB and Ethernet connection with spare battery charger

94A151113 Datalogic Skorpio™ Serial/Modem Cradle for RS232 and Modem connection

94A151112 Datalogic Skorpio™ Ethernet Multi Cradle for Ethernet connection

94A151091 Datalogic Skorpio™/F-Color Multiple Cradle for RS232 communication only

### ❑ Charger

94A151114 Datalogic Skorpio™ Multi-Battery Pack Charger (4 slots)

### ❑ Batteries

94ACC1309 Datalogic Skorpio™ Standard Battery Pack (Li-Ion battery pack 2100 mAh@3.7 V)

94ACC1329 Datalogic Skorpio-GUN™ Standard Battery Pack (Li-Ion battery pack 3300 mAh@3.7 V)

### ❑ Power Supply

94ACC1312 PG5-20 MiniUSB AC/DC Power Supply (without Cord)

94ACC1322 PG5-20 MiniUSB AC/DC Power Supply EU KIT

94ACC4595 FPS18 Power Supply without power cord for Single Cradle Desk, for MBC8600 Multi-Battery Charger

94ACC1150 Power Cord EU 3-pin (5pcs)

### ❑ Cables

94A051016 CAB-421 USB Type A-B Mini Straight

94A051017 CAB-381 USB Type A-B Straight

94A051024 CAB USB Type Standard A (4 pin F) to Mini A (5 pin M)

### ❑ Various

94ACC1311 Datalogic Skorpio™ Functional Case

94ACC1301 Stylus Pen (20 pcs)



#### NOTE

*Use only a Datalogic Mobile-approved power supply and cables. Use of an alternative power supply will invalidate any approval given to this device and may be dangerous.*

## 1.9 OPERATING SYSTEM

Datalogic Skorpio™ comes in two different models, respectively supporting Windows CE and Windows Mobile.

For further information regarding Windows Mobile refer to the website:

<http://www.microsoft.com/windowsmobile>.

## 2 CONNECTIONS

---

### 2.1 USB CONNECTION

You can use a standard mini USB cable to connect the Datalogic Skorpio™ to a host computer to transfer data.



Key:

A Host computer

C 94A051016 (Standard Mini USB cable)

B Datalogic Skorpio™

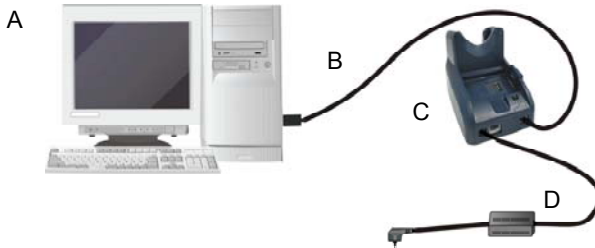


**CAUTION**

*The application of an ESD near the communication/charger pins during the USB active sync connection to an host system could result in an interruption of the link. Disconnect and insert again the Mini USB jack in order to reactivate the connection.*

For USB communication using the Datalogic Skorpio™ Single Cradle Desk or the Datalogic Skorpio™ Single Cradle Ethernet, connect the cradle to the host by means of any USB straight cord, such as Datalogic CAB-381 cable.

Insert the power supply plug into the power jack on the back of the cradle and attach the power supply to a power outlet. Once the host has been turned on, insert the Datalogic Skorpio™ mobile computer into the cradle.



Key:

- |   |  |   |  |
|---|--|---|--|
| A | Host computer                                    | C | Datalogic Skorpio™ Single Cradle Desk/<br>Datalogic Skorpio™ Single Cradle<br>Ethernet |
| B | 94A051017 CAB-381 USB<br>type A-B Straight Cable | D | Power Supply*  |

\* Recommended Power Supply: FPS18 AC/DC Power Supply (94ACC4595).

## 2.2 CONNECTION TO USB PERIPHERALS

You can use a standard A (4 pin female) to mini A (5 pin male) USB cable to connect the Datalogic Skorpio™ to a keyboard or a memory. For all these devices maximum current withdrawal must be below 100mA.



Key:

- |   |                             |   |   |
|---|-----------------------------|---|---|
| A | Keyboard with USB interface | C | 94A051024 (Standard A to Mini A USB<br>cable) |
| B | Datalogic Skorpio™          |   |   |



Key:

- A Memory with USB interface      C 94A051024 (Standard A to Mini A USB cable)
- B Datalogic Skorpio™



**NOTE**

*Datalogic Skorpio™ works with most of mentioned USB peripherals. In any case, we can't guarantee good operations with all devices available on market place.*

## 2.3 RS232 CONNECTION

The Datalogic Skorpio Single Cradle Desk, the Datalogic Skorpio Single Cradle Modem and the Datalogic Skorpio/F-Color Multiple Cradle can be connected to the Host by cable 94A054000 for 9-pin connections.

The RJ45 connector of the desired cable must be connected to the RS232 port of the cradle.

Insert the power supply plug into the power jack on the base of the cradle and attach the power supply to a power outlet.

Once the Host has been turned on, insert the Datalogic Skorpio-GUN™ terminal into the cradle.



Key:

- |                                 |  |
|---------------------------------|--|
| A) Host computer                | C) Datalogic Skorpio™ Single Cradle Desk or Datalogic Skorpio Single Cradle Modem or Datalogic Skorpio/F-Color Multiple Cradle |
| B) 94A054000 9-pin serial cable | D) Power Supply*   |

\* Recommended Power Supply: FPS18 AC/DC Power Supply (94ACC4595).



**CAUTION**

*If the mobile computer supports Windows Mobile, before plugging the RS232 cable you have to check the 'COM1 Enable' option on the 'System Configuration' window. (Start -> Programs -> System Configuration).*

## 2.4 MODEM CONNECTION

The Datalogic Skorpio™ Serial/Modem Cradle has an integrated modem and provides a modem connector, which can be used with an RJ11 connector. It can be connected to a telephone line to transfer data to a Host.



Key:

- A) Phone line to remote Host
- B) Datalogic Skorpio™ Serial / Modem Cradle
- C) Power Supply\*

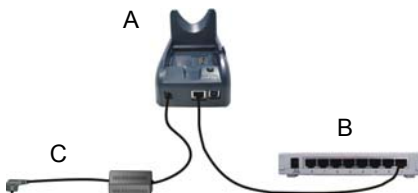
\* Recommended Power Supply: FPS18 AC/DC Power Supply (94ACC4595).

**It is mandatory to use an appropriate custom software application that calls the *DLDEVICE\_SetCradleModem* function in the SDK in order to use the cradle integrated modem port.**

Refer to the Datalogic Skorpio™ Serial/Modem Cradle instructions for further details.

## 2.5 ETHERNET CONNECTION

The Datalogic Skorpio™ Single Cradle Ethernet and the Datalogic Skorpio™ Ethernet Multi Cradle provide an Ethernet connection. Connect the Ethernet cradle to an Ethernet hub or switch. Connect the power jack to power supply\*.



Key:

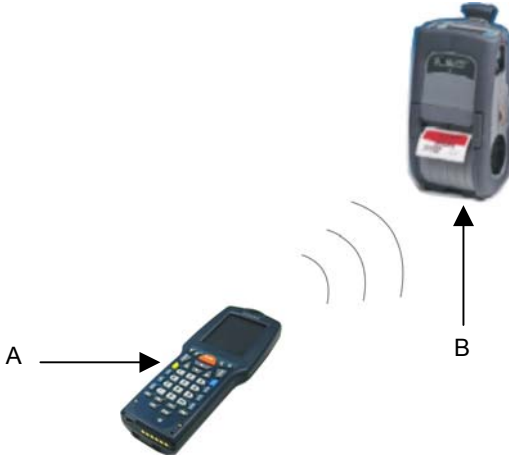
- A) Datalogic Skorpio™ Single Cradle Ethernet/  
Datalogic Skorpio™ Ethernet Multi Cradle
- B) Ethernet hub
- C) Power Supply\*

\* Recommended Power Supply: FPS18 AC/DC Power Supply (94ACC4595).

Refer to the Datalogic Skorpio™ Single Cradle Ethernet or to the Datalogic Skorpio™ Ethernet Multi Cradle instructions for further details.


## 2.6 WPAN CONNECTIONS

Datalogic Skorpio™ Bluetooth® models can communicate with a Bluetooth® device, such as a printer, within a range of 10 m, using the on-board Bluetooth® module.




Key:


- A) Datalogic Skorpio™
- B) Bluetooth® printer

 *In order to avoid wasting energy, the Bluetooth® module is off by default. If you need to have Bluetooth® working, the module must be powered on using the Wireless Communications applet (see par. 3.8.4), and perform the Discovery procedure (see par. 3.9.3).*

**NOTE**

 *Suspending the terminal powers off the Bluetooth® radio and drops the piconet (Bluetooth® connection). When the terminal resumes, it takes approximately 10 seconds for the Bluetooth® radio driver to re-initialize the radio.*

**NOTE**

 *Area coverage and Bluetooth® radio performance may vary, due to environmental conditions or interference caused by other devices (microwave ovens, radio transmitters, etc.), etc.*

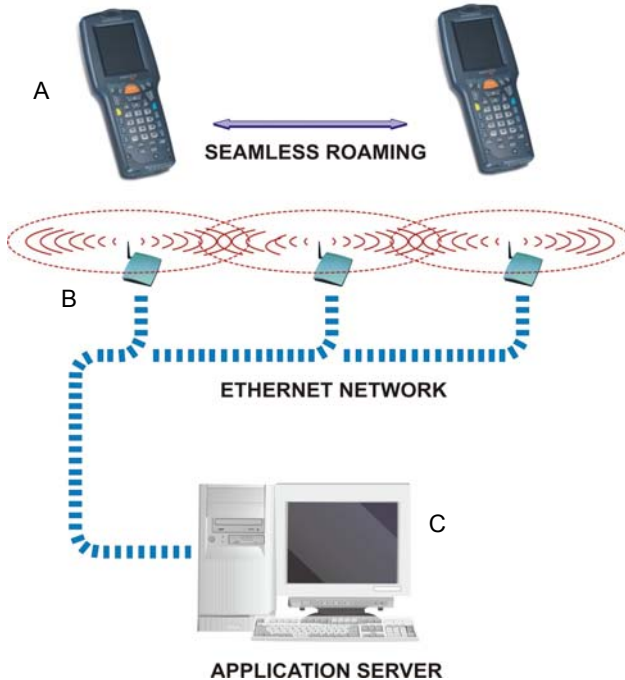
**NOTE**

## 2.7 WLAN CONNECTION

Datalogic Skorpio™ Wi-Fi 802.11b and Wi-Fi 802.11b/g<sup>1</sup> models can communicate with the host using the on-board radio frequency module and an Access Point connected to the host computer.

For models using the WiFi7 radio (7xx-xxx-xxx models), you can find information about the applet for radio configuration: <http://www.summitdatacom.com/SCU.htm>. To launch this utility you can tap the specific icon if it's visible on the taskbar or:

1. On Windows CE devices, you can open Connections folder or Control Panel from desktop and select the 'Summit Client Utility' icon.
2. On Windows Mobile devices, you can select the menu item: Start->Programs->Summit and tap the 'Summit Client Utility' icon.



Key:

- A) Datalogic Skorpio™
- B) Access point
- C) Host – Application Server

<sup>1</sup> Note: unless otherwise specified, the Wi-Fi term is used both for the 802.11b and the 802.11b/g cards.

**NOTE**

*Wi-Fi module is on by default, in order to avoid wasting energy, you can switch it off using the Wireless Communications applet.*

**NOTE**

*Suspending the terminal powers off the 802.11b/g radio and drops the radio connection. When the terminal resumes, depending on the radio power mode and security protocol selected, it takes approximately from 10 to 30 seconds for the 802.11b/g radio driver to re-associate the radio to the network.*

**NOTE**

*Area coverage and radio performance may vary, due to environmental conditions, access points types or interference caused by other devices (microwave ovens, radio transmitters, etc.)*

## 2.8 WIRELESS AND RADIO FREQUENCIES WARNINGS



### WARNING

*Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the product and may violate laws and regulations.*



### WARNING

*Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals generated by Datalogic Joya™ and I7252™.*



### WARNING

*Datalogic recommends persons with pacemakers or other medical devices to follow the same recommendations provided by Health Industry Manufacturers Associations for mobile phones.*

*Persons with pacemakers:*

- *Should ALWAYS keep this device more than twenty five (25) cm from their pacemaker and/or any other medical device;*
- *Should not carry this device in a breast pocket;*
- *Should keep the device at the opposite side of the pacemaker and/or any other medical device;*
- *Should turn this device OFF or move it immediately AWAY if there is any reason to suspect that interference is taking place.*
- *Should ALWAYS read pacemaker or any other medical device guides or should consult the manufacturer of the medical device to determine if it is adequately shielded from external RF energy.*

*In case of doubt concerning the use of wireless devices with an implanted medical device, contact your doctor.*



### WARNING

*Turn this device OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may use equipment that could be sensitive to external RF energy.*

**WARNING**

*RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.*

**WARNING**

*An air bag inflates with great force. DO NOT place objects, including either installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If vehicle's wireless equipment is improperly installed and the air bag inflates, serious injury could result.*

**WARNING**

*Turn off the device when in any area with a potentially explosive atmosphere. Observe restrictions and follow closely any laws, regulations, warnings and best practices on the use of radio equipment near fuel storage areas or distribution fuel areas, chemical plants or where some operation involves use of explosive materials.*

*Do not store or carry flammable liquids, explosive gases or materials with the device or its parts or accessories.*

*Areas with a potentially explosive atmosphere are often, but not always, clearly marked or showed.*

*Sparks in such areas could cause an explosion or fire, resulting in injury or even death.*

## 3 USE AND FUNCTIONING

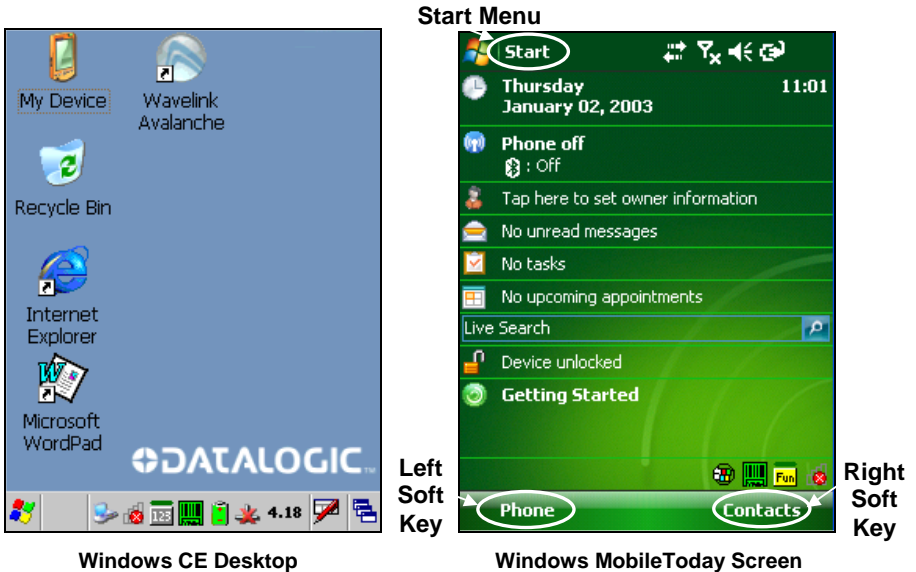
The use of the Datalogic Skorpio™ depends on the application software loaded. However there are several parameters that can be set and utilities that can be used to perform some basic functions such as data capture, communications, file management, etc.

### 3.1 STARTUP

The Datalogic Skorpio™ turns on when the battery pack or the external supply is inserted.

After the battery pack is installed, use the [ON/OFF] key to turn the mobile computer on and off.

As soon as the mobile computer is on, the Windows CE/ Windows Mobile desktop configuration will appear on the screen. Wait a few seconds before starting any activity so that the mobile computer completes its startup procedure.



Use the stylus as suggested in paragraph 3.3 to select icons and options.

For the use of Left and Right Soft Keys, refer to par. 3.8.1.

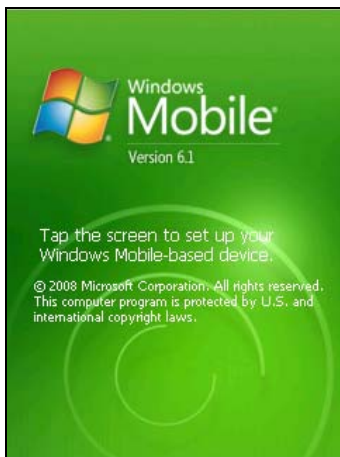
The mobile computer goes into power-off (low power with display backlight off), when it is no longer used for more than a programmable timeout, which is defined in the POWER applet of the Control Panel. In this mode it can be awakened (resuming operation) by the [ON/OFF] key or SCAN key if enabled (see par. 3.8.1).

**NOTE**

*The mobile computer can also be awakened or turned off by the application program.*

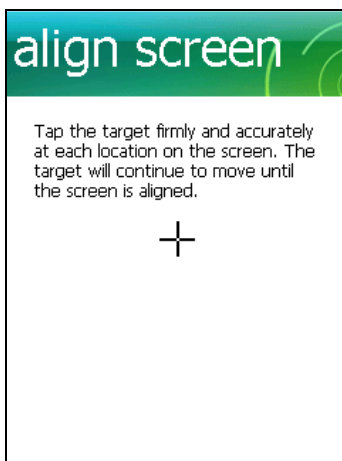
## 3.2 WINDOWS MOBILE WELCOME WIZARD

In Windows Mobile, at the very first Skorpio™ startup, following a cold boot or following a registry restore to default values, the mobile computer startup (see par. 3.1) is preceded by the Welcome Wizard.



**Welcome Wizard Screen**

The Welcome Wizard allows the user to calibrate the touch screen (see par. 3.8.6) and to configure an email account and a password to protect the terminal.



**Touch Screen Calibration Screen**

### 3.3 USING THE STYLUS

The stylus selects items and enters information. The stylus functions like a mouse.

<b>Tap:</b>	Touch the screen once with the stylus to open items and select options (Windows Mobile only).
<b>Double Tap:</b>	Touch the screen twice with the stylus to open items and select options (Windows CE only).
<b>Drag:</b>	Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
<b>Tap-and-hold:</b>	Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

To recalibrate the touch screen use the Stylus Applet (see par. 3.8.6).



#### CAUTION

*Use only original Datalogic styluses supplied with the product itself.*

*In harsh applications, use of screen protectors should be taken into consideration, in order to extend the touch screen operating life.*

*To prevent damage to the screen, do not use sharp devices or any device other than the Datalogic Mobile-provided stylus.*

*Do not apply not necessary high pressures on the screen.*

*For applications where an intensive use of the touch screen is foreseen, please consider that touch screen components are subject to progressive wear.*

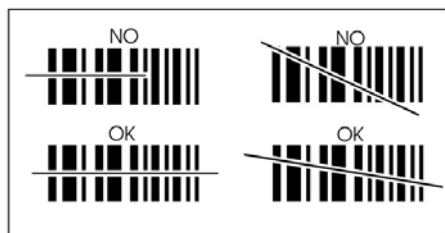
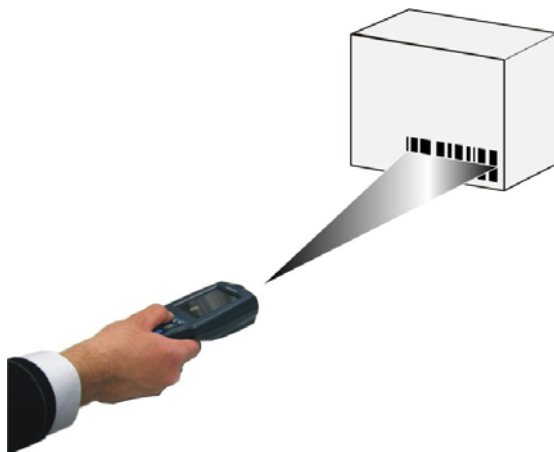
## 3.4 DATA CAPTURE

To capture data first of all select the barcode icon on the bottom-right side of the display and tap the 'Capture' menu item then proceed with the following directions. To configure and enable data capture parameters refer to par. 3.7.

### 3.4.1 Laser Data Capture

To scan barcodes, point the Datalogic Skorpio™ laser model onto the code from a distance within the reading range while pressing the SCAN key.

The lighted band emitted by the laser must completely intercept the barcode as shown in the figure below. If enabled, the emission of an acoustic signal will indicate that the scan has taken place correctly.



### 3.5 DESCRIPTION OF THE KEYS








The Datalogic Skorpio™ provides two different keyboards, an alphanumeric keyboard and a numeric keyboard, having a total of respectively 38 and 28 keys.

#### 3.5.1 Alphanumeric Keyboard (38-Key Model)





The following image shows the Alphanumeric keyboard.



## Main Keys Function

KEY	FUNCTION
	<p>It starts data capture. If enabled, it also wakes up the mobile computer from low-power (see par. 3.8.1).</p> <p>For Datalogic Skorpio-GUN™ models only, the trigger performs the same function as the SCAN key.</p>
	<p>They let you move forwards, backwards, upwards or downwards within text fields, scroll through a Menu list or browse among folder files.</p>
	<p>After a blue modifier key press, the blue arrows allow moving forwards or backwards within the Internet Explorer browser pages.</p>
	<p>Yellow modifier: when pressed before a standard key, it enables the character printed in yellow above the key. All yellow characters will remain selectable until the yellow modifier key is pressed again.</p>
	<p>Blue modifier: when pressed before a standard key, it enables the function printed in blue above the key. After the function is selected the keyboard returns to standard mode.</p>
	<p>After a blue modifier key press, subsequent key presses allow the selection of seldom used characters (symbols). The selected character is entered after a short timeout or if a different key is pressed.</p>
	<p>It powers the Datalogic Skorpio™ ON or OFF. It is recessed to avoid accidental power off during use.</p>
<b>Home</b>	<p>After a blue modifier key press, it allows returning to the Home page.</p>
<b>Stop</b>	<p>After a blue modifier key press, it allows ending a page downloading.</p>
<b>Refresh</b>	<p>After a blue modifier key press, it performs a page refresh.</p>

## Special Function Icons







ICON	FUNCTION
	After a blue modifier key press, it opens the Start menu.
	After a blue modifier key press, it opens the file manager.
	After a blue modifier key press, it modifies the display backlight intensity (5 levels available through subsequent presses).
	After a blue modifier key press, it locks and unlocks the keyboard.

### 3.5.2 Numeric Keyboard (28-Key Model)

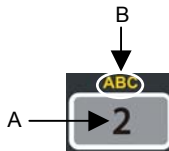
The following image shows the Numeric keyboard.



## Main Keys Function

KEY	FUNCTION
	<p>It starts data capture. If enabled, it also wakes up the mobile computer from low-power (see par. 3.8.1).</p> <p>For Datalogic Skorpio-GUN™ models only, the trigger performs the same function as the SCAN key.</p>
	<p>They let you move forwards, backwards, upwards or downwards within text fields, scroll through a Menu list or browse among folder files.</p>
	<p>After a blue modifier key press, the + and – keys allow moving respectively forwards and backwards within the Internet Explorer browser pages.</p>
	<p>Yellow modifier: when pressed before a standard key, it enables the character printed in yellow above the key. All yellow characters will remain selectable until the yellow modifier key is pressed again.</p>
	<p>Blue modifier: when pressed before a standard key, it enables the function printed in blue above the key. After the function is selected the keyboard returns to standard mode.</p>
	<p>It powers the Datalogic Skorpio™ ON or OFF. It is recessed to avoid accidental power off during use.</p>

Keys from “1” to “•” share the following behavior scheme:



- A. Function of the key when directly pressed.
- B. Function of the key after a yellow modifier key press.  
 Press the key until the desired letter is shown.  
 The letter is entered if you wait for a short timeout or if you press a different key.

## Special Function Icons

**ICON****FUNCTION**

After a blue modifier key press, it modifies the display backlight intensity (5 levels available through subsequent presses).

### 3.5.3 Resetting the Skorpion™

#### Windows CE

There are several reset methods for the Skorpion.

A warm boot terminates an unresponsive application and clears the working RAM, but preserves both the file system and the registry.

A cold boot forces all applications to close and clears working RAM and files not resident on the persistent flash memory. Registry is restored from persistent memory if available or returned to factory default.

A Clean Boot restores the Skorpion to factory configuration: both the registry and the file system return to factory default.

#### Warm Boot

A warm boot closes all applications, clears the working RAM, but preserves the file system and registry. If an application hangs, initiate a warm boot to terminate the application.

To perform a warm boot, press and hold (for a while) the following keys simultaneously:



#### Cold Boot

A cold boot is a complete reset of the Skorpion in which all applications are forcibly closed and the RAM is completely cleared. Registry is restored from persistent memory if a saved copy is available (see 3.8.2) and RAM file system completely erased. You will lose any applications and data (included registry) which are not stored in persistent flash memory.

A cold boot is necessary when the Windows CE operating system locks up and the warm boot command does not work.

To perform a cold boot, press these keys simultaneously:



#### Clean Boot

A clean boot is a cold boot that causes the device to be restored to factory configuration. The Skorpion will reset to its factory configuration, clear the working RAM and initialize the file system. You will lose any applications and data stored in persistent flash memory. At the next startup the system will ask to recalibrate the touch screen.

To perform a clean boot, follow these steps:

1. Perform a Cold Boot (see Cold Boot).
2. Quickly release all the keys when the screen goes black.
3. Within 1 second press and hold down the Esc and 0 keys until the left orange led starts blinking.
4. Release the Esc and 0 keys.
5. Enter 1 to proceed with the Clean Boot sequence. Enter 0 to cancel the Clean Boot and proceed with a Cold Boot.

	Warm Boot	Cold Boot	Clean Boot
<b>Registry</b>	Preserved	Restored from flash (if available)	Factory default
<b>Flash Disk (Backup Folder)</b>	Preserved	Preserved	Clean disk
<b>RAM File System</b>	Preserved	Reinitialized (factory default)	Factory default



**CAUTION**

*Before performing a reset, it is recommended to:*

- *execute a system backup to keep your more important files and applications persistent. See par. 3.10;*
- *save the registry to non-volatile memory to guarantee the persistence of the Windows configuration. See par. 3.8.2.*

## Windows Mobile

There are several reset methods for the Skorpio.

A warm boot terminates an unresponsive application and clears the working RAM, but preserves the file system. Registry are restored from persistent memory if available or returned to factory default.

A cold boot forces all applications to close reinitializing completely the system. It clears the working RAM, but the file system is preserved. Registry are restored from persistent memory if available or returned to factory default.

A clean boot restores the Skorpio to a clean configuration: both the registry and the file system return to a clean status that conform to factory default, unless the user has installed an additional package.

### Warm Boot

A warm boot closes all applications and clears the working RAM, but preserves the file system. Registry are restored from persistent memory if a saved copy is available (see Registry Applet, par. 3.8.2) or returned to factory default. If an application hangs, initiate a warm boot to terminate the application.

To perform a warm boot, press and hold the following keys simultaneously:



### Cold Boot

A cold boot is a complete reset of the Skorpio in which all applications are forcibly closed and the RAM is completely cleared. Registry is restored from persistent memory if a saved copy is available (see Registry Applet, par. 3.8.2). Applications and data stored on file system are preserved. A cold boot is necessary when the Windows Mobile operating system locks up and the warm boot command does not work.

To perform a cold boot, press and hold the following keys simultaneously:



### Clean Boot

A clean boot is a cold boot that causes the device to be restored to a clean configuration. The Skorpio will be reset to its factory configuration only if the user has not installed any additional package. Please note that you will lose any applications and data stored in persistent flash memory.

To perform a clean boot, follow these steps:

1. Perform a Cold Boot (see Cold Boot).
2. Quickly release all the keys when the screen goes black.
3. Within 1 second press and hold down the Esc and 0 keys until the left orange led starts blinking.
4. Release the Esc and 0 keys.
5. Enter 1 to proceed with the Clean Boot sequence. Enter 0 to cancel the Clean Boot and proceed with a Cold Boot.

	Warm Boot	Cold Boot	Clean Boot
<b>Registry</b>	Restored from flash	Restored from flash	Clean configuration (no user config)
<b>File System</b>	Preserved	Preserved	Clean Installation (no user files)

## 3.6 STATUS INDICATORS

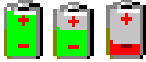










### 3.6.1 LED Status

The Datalogic Skorpio™ provides two different LEDs signaling the mobile computer status.

LED	STATUS	
Good Read and General Purpose (left-side)	Green	It is constant for a configurable time to signal that a successful read has occurred.
	Green/Red	It is also available to the application program.
Charging Status and Battery Low Warning (right side)	Green constant	It is constant once the charging process has been completed.
	Red blinking	When the mobile computer is powered by the battery (not by the cradle nor by the cable), this LED blinks red to signal that the battery is running down.
	Red constant	It is constant while charging.
	Orange blinking	It blinks when a charging error has occurred, for example when safe charging timeout has expired.

### 3.6.2 Taskbar

As well as tasks opened in Windows, the Taskbar provides several status icons that report information about the time, the battery level, the keyboard function, and the decoding status.

ICONS	DESCRIPTION
<b>Time and Battery Icons</b>	
<b>10.50</b>	It displays the time.
	In Windows CE, they are representative of five different icons indicating the battery level. The icon is partially green when the power left is >20% and partially red colored when the power left is <20%.
	In Windows Mobile, it displays the system battery status.
	It indicates that the mobile computer is powered by a USB connector or through the cradle (Windows CE).
	It indicates that the mobile computer is powered by a USB connector or through the cradle (Windows Mobile).
<b>Keyboard Status Icons</b>	
	It indicates that the blue modifier key has been pressed and is going to affect the next key press.
	It indicates that the yellow modifier key has been pressed and is going to affect the next key press.
	It indicates that the yellow modifier key has enabled the selection of the characters printed in yellow above the keyboard.
	It indicates the standard keys selection, so that the yellow modifier key has not been pressed.
	It indicates that the yellow modifier key has enabled the selection of the characters printed in yellow above the keyboard and the Capslock is active.
	It indicates that the keyboard is locked.
<b>Decoding Status Icons</b>	
	It indicates that the decoder is active (green), not active (grey).



Windows CE Taskbar



Windows Mobile Taskbars

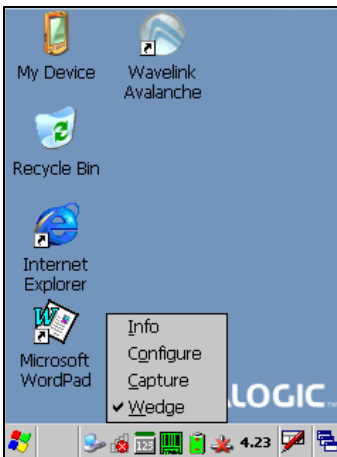
## 3.7 DATA CAPTURE CONFIGURATION

From the Windows CE Taskbar, tap the "Decoding" icon to open a drop-down menu. Decoding can also be accessed from the Control Panel.

By selecting the *Info* item from this drop-down menu you can access information about the Scanner and the Software; the *Configure* item opens the configuration applet (Data Capture Configuration Window), while *Capture* accesses the data capture applet (Data Capture Window), which enables code reading.

The last menu item (*Wedge*) enables Wedge Emulation.

From the Windows Mobile Start menu, tap Settings -> System -> Decoding. The "Decoding" icon opens the configuration applet (Data Capture Configuration Window).



Windows CE



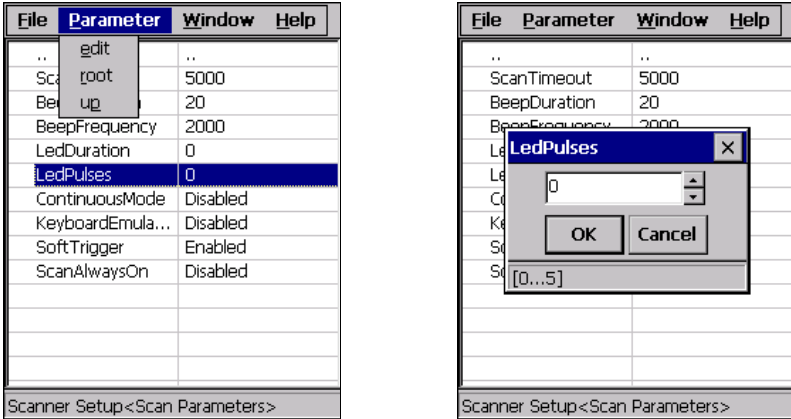
Windows Mobile

### 3.7.1 Configure

The Configuration applet contains the barcode scanning configuration parameters in a directory tree structure. The available barcode parameters are divided into two groups: Reader Parameters and Scan Parameters.

The Reader Parameters depend on the type of scanner module installed on the mobile computer and allow barcode configuration (i.e. enable/disable Code 39, check digit control, etc.).





### Selecting Data Capture Setup Parameters

Alternatively using the stylus, you can tap once directly on the value on the right column; continue tapping until the desired value is reached.

To activate a new configuration select the File ->Save Menu to send the new configuration to the barcode decoding software and save the new configuration. This will save the configuration to non-volatile memory preventing loss at the next system reset.

## Reader Parameters

The barcode reading parameters and values are dependent upon the type of scanner module mounted in your mobile computer. For a detailed list of parameters and of their configuration procedures, please refer to the SDK Help file on the CD.

## Scan Parameters

The Scan Parameters are common to all scanner modules and allow control of the scanning device. The Scan parameters are described as follows:

**ScanTimeout:** the maximum time, in milliseconds, during which the scanner remains on without decoding any barcode.

**GoodReadSound:** is the filename of a .wav file played when the scanner reads a code.

**LedDuration:** the length of the good-read led pulse, in milliseconds.

**LedPulses:** the number of times the good-read led pulse is emitted when the scanner reads a code.

**ContinuousMode:** when enabled, the scanner can only be turned off by releasing the SCAN key, or if Soft Trigger is enabled, by the application program. Continuous Mode overrides Scan Timeout.

**KeyboardEmulation:** if enabled all scanned data are transformed into keyboard events and can therefore be displayed and saved to a file as if input from the mobile computer keyboard. If set to "Yes (Clipboard)", it copies the scanned data to the system clipboard.

**SoftTrigger:** when enabled, the laser can be turned on/off by the application software.

**ScanAlwaysOn:** enables the scanner for barcode reading independently from the application software. If set to "Disabled after read", it disables the reading after a reading attempt. In case the scan button is accidentally pressed, this selection prevents the driver from decoding new data while the application is still elaborating previous data.

**Green Spot Duration:** determines the duration (measured in milliseconds) of the green spot feedback, which provides a "good read" green dot directly on the code, where the operator usually tends to be looking.

**NotPrintableChar:** if set to "Remove", all not printable characters included in the scanned data are deleted and the final barcode will include only printable characters.

**ScanButton:** it activates/deactivates the scanner for bar code reading.

## Default Settings

The following tables contain the default values for the major barcode setup parameters, according to the type of scan engine mounted on the mobile computer. For a complete list of parameters and of their configuration procedures, please refer to the SDK Help file on the CD.

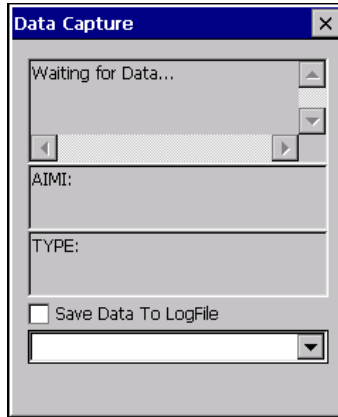
<b>SCAN PARAMETERS</b>	
ScanTimeout	5000
GoodReadSound	Beep.wav
LedDuration	200 mS
LedPulses	1
ContinuousMode	Disabled
KeyboardEmulation	Enabled
SoftTrigger	Enabled
ScanAlwaysOn	Disabled
GreenSpotDuration	1000
NotPrintableChar	Leave
ScanButton	Enable

<b>BARCODE SYMBOLOGY SPECIFIC READER PARAMETERS</b>	
UPC A	Enabled
UPC E	Enabled
EAN 8	Enabled
EAN 13	Enabled
Code 39	Enabled
Code 39 Full ASCII	Disabled
Code 32	Disabled
2/5: Interleaved	Enabled
2/5: Industrial	Disabled
2/5: Matrix	Disabled
Code 128	Enabled
EAN 128	Enabled
Codabar	Enabled

<b>BARCODE SYMBOLOGY SPECIFIC READER PARAMETERS</b>	
MSI	Enabled
Plessey	Disabled
Code 93	Disabled
Code 11	Disabled

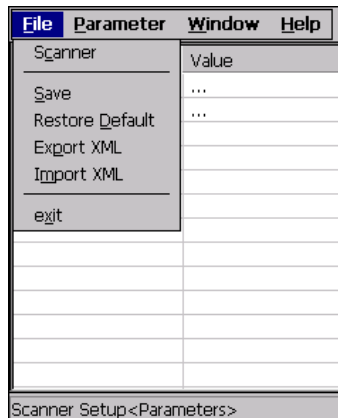
### 3.7.2 Capture

The Data Capture applet (Capture) enables code reading.



**Data Capture Window**

Data Capture can also be enabled through the Configuration applet by selecting File ->Scanner from the main menu, or by enabling the parameter Scan Always On in the Scan Parameters branch.

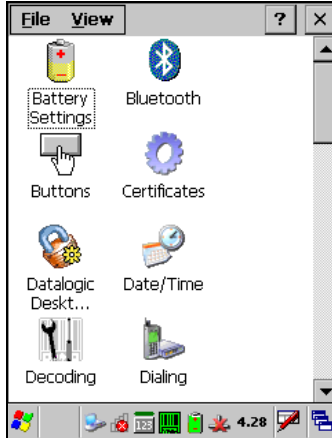


**Enabling the Data Capture**

### 3.8 CONTROL PANEL

From the Windows CE Desktop, double tap on the "My Device" icon and then double tap on the "Control Panel" icon to open the Windows CE control panel main window. The Control Panel can also be launched from Start ->Settings ->Control Panel.

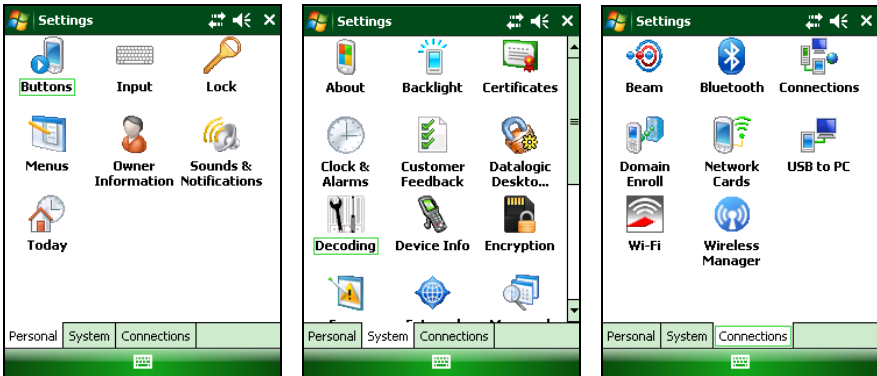
APPLET programs are displayed as icons; one icon corresponds to each APPLETT.



**Windows CE Control Panel**

From the Windows Mobile Start menu, tap Settings. A three tab dialog opens: Personal, System, Connections.

APPLET programs are displayed as icons; one icon corresponds to each APPLETT.



**Windows Mobile Control Panel**

### 3.8.1 Buttons

To configure the way up/down and the rest of keys control repeats, use the Up/Down Control applet (Start -> Settings -> Personal -> Buttons -> Up/Down Control).

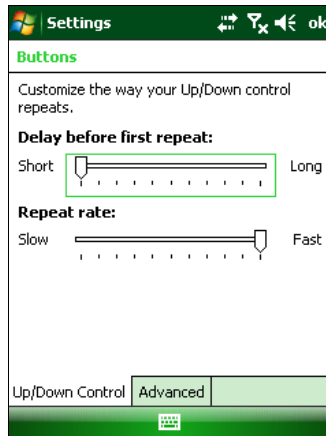


Windows CE Buttons Icon



Buttons

Windows Mobile Buttons Icon



On both Windows CE and Windows Mobile models, you can also select to wake up the terminal by the SCAN key and trigger key (for Datalogic Skorpio-GUN™ only).

To assign desired applications to be launched by one of the keys, refer to DFU Reference Guide.

### 3.8.2 Registry

The REGISTRY ADMIN applet provides management of Windows CE/ Windows Mobile registry.

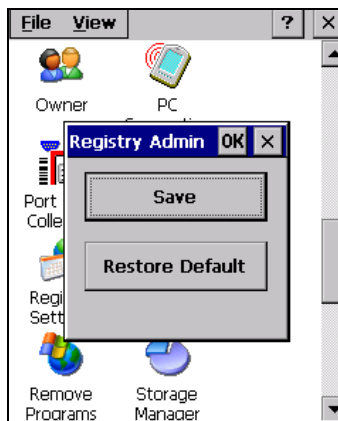
From the Windows CE control panel main window, select the REGISTRY ADMIN applet by double tapping the Registry Admin icon.

From the Windows Mobile Start menu, tap Settings -> System ->Registry Admin. Select the REGISTRY ADMIN applet by tapping the Registry Admin icon.

The Registry Administration Main window appears. Two functions are available:

- Save Registry allows permanently saving the Windows configuration (example: custom configuration of screen desktop background color, or network adapter configuration) to non-volatile memory (SAVE button).
- Restore Default Registry allows restoring the initial factory default configuration (Restore Default button). After restoring the factory default configuration, you must perform a warm boot.

Saving the registry to non-volatile memory guarantees the persistence of the Windows configuration in case of battery pack replacement, cold boot or warm boot on Windows Mobile.



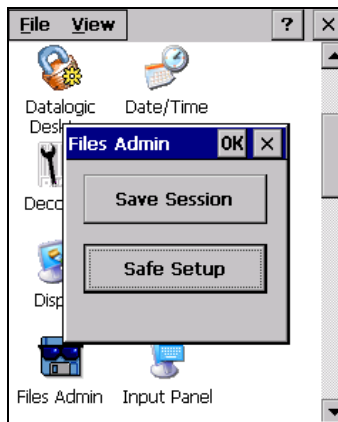
**Registry Administration Window**

### 3.8.3 Files Admin

The FILES ADMIN applet enables control of the permanence of files in the Windows CE System Folder.

Because Windows Mobile mounts the entire file system in persistent store (rather than using RAM), it provides both users and applications with a reliable storage platform even in the absence of battery power. The FILES ADMIN applet is therefore not necessary.

Two functions are available on the Files Admin Main window by means of two buttons:



**Files Admin Main Window**

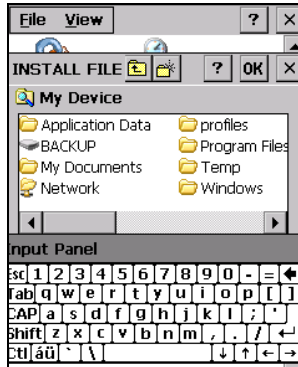
**Save Session:** with this button all files will be permanently saved in the \Windows directory in non-volatile memory. This function guarantees the steady maintenance of every file produced during the current working session - even of sub-directories and relevant files - with the exception of the files belonging to the FLASH image. These current working session files will be backed-up in the \Backup\Windows directory.

At the next cold boot, the files previously saved in the \Backup\Windows directory will be restored to the Windows directory (see par. 3.10).

**Safe Setup:** with this button, the installation of software programs will be saved to non-volatile memory (Backup directory). Before doing this, it will be checked that the Backup directory has enough space to save the files. If the directory space is not enough, an error message will be shown and the program will exit the Safe Setup function.

Two activating procedures are available for Safe Setup:

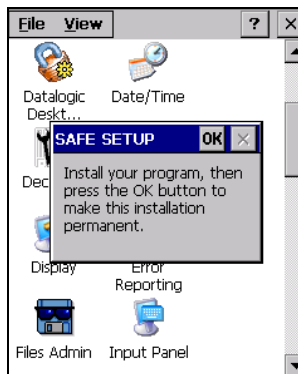
- Select an installation file (for example, a .CAB cabinet file) from the Safe Setup mask.



**Safe Setup First Mask**

Then select Windows or a relevant sub-directory in the path box. Then, Safe Setup will recognize the new files and directories present in the Windows directory, and will copy them to the \Backup\Windows directory. At the next cold boot, these files will be restored (see par. 3.10).

- Simply skip the first mask either by closing it or by pressing the ESC key. When it closes, a new mask will pop up: it will enable any type of installation (even remote ones like ActiveSync® installations). Make sure the installation directory is \Windows or one of its sub-directories. After installation, tap OK: Safe Setup will save the new files in the \Backup\Windows directory.



**Safe Setup Second Mask**

### 3.8.4 Wireless Communications

The WIRELESS COMMUNICATIONS applet provides management of the Wi-Fi Card and of the Bluetooth® module.

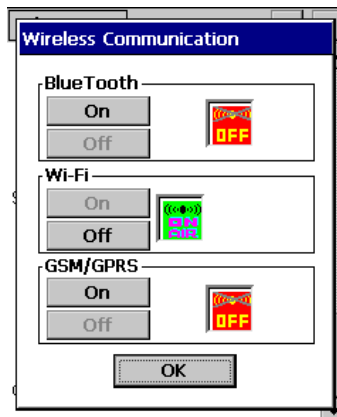


**Windows CE Wireless Communications  
Icon**



**Windows Mobile Connectivity Icon**

If the mobile computer supports Windows CE, select the WIRELESS COMMUNICATIONS applet by double tapping the Wireless Communications icon. The following window will appear:

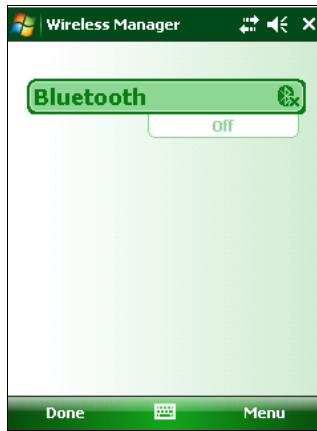


**Wireless Communications Window**

If the mobile computer supports Windows Mobile, the Wireless Manager application manages access to wireless connections.

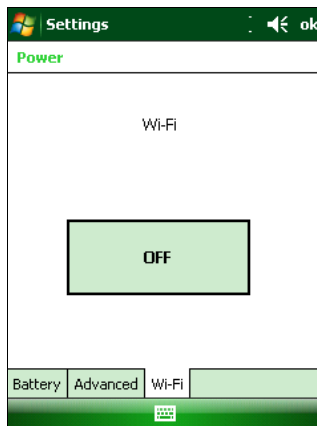
The 'Wireless Manager' is a sort of 'Control Panel' for bluetooth and phone modules. From here it's possible to turn on or off bluetooth and phone radio stacks.

Open the Wireless Manager by tapping Start -> Settings -> Connections -> Wireless Manager, or by tapping the Connectivity icon located at the top of the screen. The following window will appear:



**Windows Mobile Wireless Communications Window**

To turn on/off the Wi-Fi radio open the Wi-Fi power applet by tapping Start -> Settings -> System -> Power -> Wi-Fi:



### 3.8.5 Ethernet Settings

#### Windows CE Ethernet Cradle

Datalogic Skorpio™ can be connected to an Ethernet network by inserting it into the Datalogic Skorpio™ Single Cradle Ethernet or into the Datalogic Skorpio™ Ethernet Multi Cradle.

**NOTE**

*Ethernet communication requires Datalogic Skorpio™ SW version 5.41 or later. Verify the software version by tapping on Software – Version in the Datalogic default home page. Otherwise, search for the file version.htm under the Windows folder.*

When correctly inserted into the cradle, the Ethernet driver installed on the mobile computer will automatically run, and using the DHCP service, will dynamically assign the IP Address.

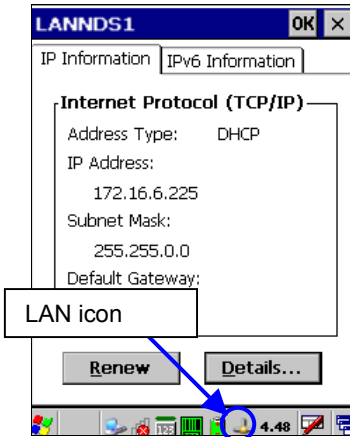
1. From the Datalogic Skorpio™ open Internet Explorer>Internet Options and check *use LAN no autodial* then OK.
2. From the Datalogic Skorpio™ > Explorer, enter the IP address or the PC name in the address bar. You may be required to enter your network username and password. The LAN connection will take place and you will be able to see the PC shared folders and exchange files.

If your network provides Internet Service and does not use a proxy server you can directly access the Internet. Otherwise set the internet proxy parameters according to your network settings.

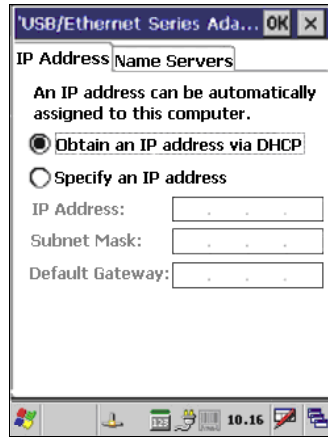
The LAN icon will appear on the Taskbar indicating the LAN connection status.

By double tapping on the LAN icon in the Taskbar, the LANNDS1 applet allows visualizing the TCP/IP information. Other information such as the MAC Address is available by tapping the Details... button.

If it is necessary to set static TCP/IP parameters, you must open the LANNDS1 applet from the Network and Dial-up Connections applet in the Control Panel. This applet is only visible when the mobile computer is correctly inserted into the cradle.



**Ethernet LANNDS1 Communications Window**

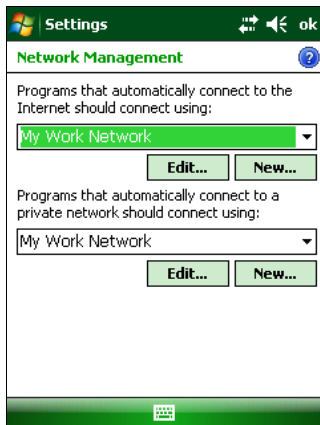


The IP Address belongs to Datalogic Skorpio™ while the MAC address is specific to each cradle slot.

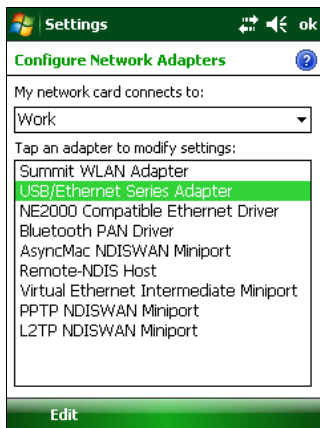
## Windows Mobile Ethernet Cradle

Before using the ethernet cradle you have to un-check the 'COM1 Enable' option on the 'System Configuration' window (Start -> Programs -> System Configuration) and re-boot the unit.

For internet browsing through the ethernet cradle ensure that programs that automatically connect to the internet should connect using 'My Work Network' -> go to Start -> Settings -> Connections -> Connections -> Advanced -> Select Networks:



then ensure that the USB/Ethernet Adapter card connects to Work -> go to Start -> Settings -> Connections -> Network Cards:



### 3.8.6 Stylus Calibration

You might need to recalibrate the touch screen (i.e. when you attempt to select one item with the stylus, another item is erroneously selected).

To recalibrate the touch screen on Windows CE, complete the following steps:

1. Select **Start > Settings > Control Panel > Stylus** to open the **Stylus Properties** dialog as shown in Figure 1.
2. Adjust **Double-Tap** sensitivity if needed or desired.
3. Select the **Calibration** tab to open the **Calibration** application.

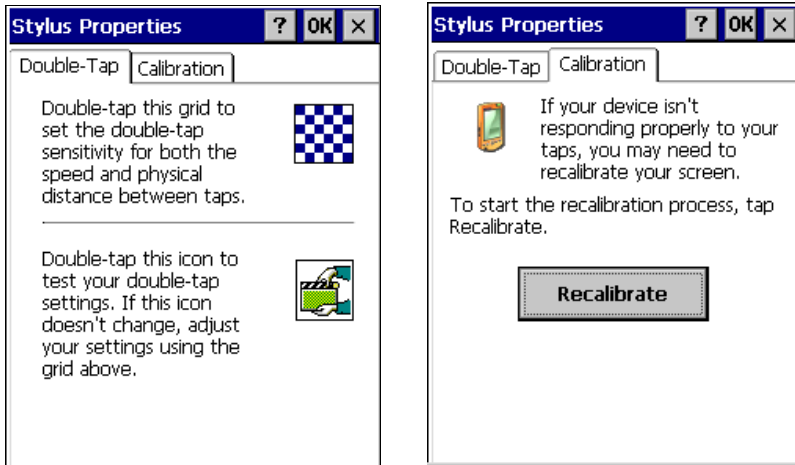
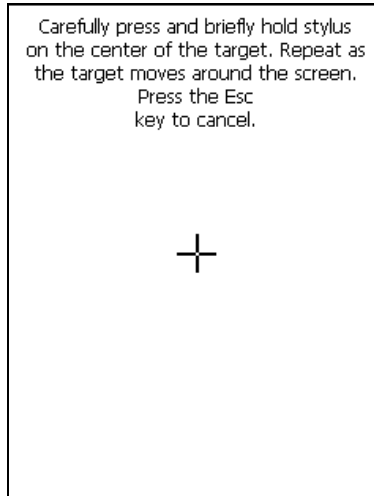


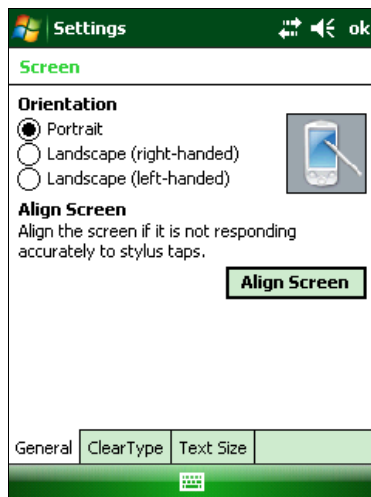
Figure 1

4. Tap **Recalibrate** to open the **Calibration** screen shown in Figure 2.
5. Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen. Press the **<ESC>** key to cancel the stylus calibration.
6. Press the **<ENTER>** key or tap the screen to accept the new calibration settings. Press the **<ESC>** key to keep the old settings.
7. New calibration settings are persistently saved in registry.

**Figure 2**

To recalibrate the touch screen on Windows Mobile, complete the following steps:

1. Select **Start > Settings > System > Screen** to open the **Screen Settings** dialog as shown in Figure 3.

**Figure 3**

2. Tap **Align Screen** to open the **Calibration** screen shown in Figure 4.
3. Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen. Press the **<ESC>** key at any time to cancel the stylus calibration.
4. By completing the calibration procedure you implicitly accept the new calibration settings.
5. New calibration settings are persistently saved in registry.

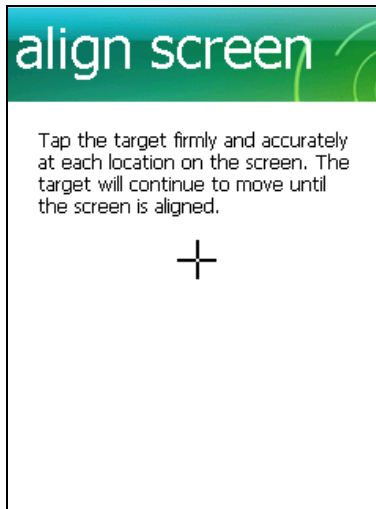


Figure 4

## Startup stylus calibration on Windows CE

When starting the terminal, a stylus calibration screen comes up if valid calibration settings are not available. This happens in the following circumstances:

1. At the first startup of the terminal.
2. After restoring registry default settings using the applet **Registry Admin** and performing a warm boot.
3. After a **Clean Boot**.
4. After a **Firmware Update** (see par. 3.11).

## Startup stylus calibration on Windows Mobile

When starting the terminal, a Welcome Wizard (with Stylus Calibration) comes up if valid calibration settings are not available. This happens in the following circumstances:

1. At the first startup of the terminal.
2. After restoring registry default settings using the applet **Registry Admin** and performing a boot.
3. After a **Clean Boot**.

## 3.9 WINDOWS CONNECTIONS

To connect Datalogic Skorpion™ to another device (i.e. Host PC) from Windows, several programs are available. These programs require specific electrical connections in order to function properly.

### 3.9.1 Microsoft® ActiveSync®

Microsoft® ActiveSync® gives you the possibility to connect your desktop computer to your Datalogic Skorpion™ and synchronize the information on them. Synchronization compares the data on the Datalogic Skorpion™ with that on the desktop computer and updates both computers with the most recent information.

With ActiveSync®, it is possible to:

- Back up and restore Datalogic Skorpion™ data.
- Copy files between Datalogic Skorpion™ and desktop computer.
- Synchronize files by selecting a synchronization mode.

You can establish an ActiveSync® connection to your Datalogic Skorpion™ through the following electrical interfaces:

- **USB** either directly or through one of the USB cradles (Datalogic Skorpion™ Single Cradle Desk/ Datalogic Skorpion™ Single Cradle Ethernet).
- **Bluetooth®** (see par. 3.9.3).

**NOTE**

*If uploading/downloading files through an RS232 serial connection, Microsoft® ActiveSync® is not used. Refer to par. 3.9.2 for details.*

It is possible to constantly synchronize while connected to a desktop computer or, alternatively, synchronization can be performed only when the synchronize command is chosen. You can select which information types are synchronized and control how much data is synchronized.

**NOTE**

*By default, ActiveSync® does not automatically synchronize all types of information. Use ActiveSync® options to turn synchronization on and off for specific information types.*

For example:

Synchronize Microsoft Word and Microsoft Excel files between the Datalogic Skorpio™ and the desktop computer. The files will automatically be converted to the correct format.



**NOTE**

*In Windows Mobile before using the ActiveSync follow the directions described in 2.3.*



**NOTE**

*Visit the following Microsoft Web site for the latest in updates, technical information, and samples:*

*<http://www.microsoft.com/windowsmobile/resources/downloads>*

## **ActiveSync® Remote**



**NOTE**

*Microsoft® ActiveSync® Remote is no longer supported in Windows CE. For backward compatibility you can download it from the internet. We suggest enabling the FTP Server and connecting to an FTP Client. See par. 3.9.4.*

### 3.9.2 Uploading/Downloading Files through an RS232 Connection

Files can be uploaded/downloaded through the device cradle connected via an RS232 cable.

Before performing this operation, it is first necessary to define the PC and the mobile computer settings and connection.

**NOTE**

*If uploading/downloading files through a serial connection, Microsoft® ActiveSync® is not used.*

#### 1 - PC Settings

Follow the procedure to install the modem and define the connection settings:

- a) Select Start ->Settings ->Control Panel and run the "Phone and Modem" options; choose the "Modem" tab and press the "Add" button to make the "Add Hardware Wizard" window appear;
- b) From the "Add Hardware Wizard" window choose "Don't detect my modem" and press the "Next" button. Then, choose "Standard Modem" from the "Manufacturer" list, and "Communications cables between two computers" from the "Models" list. Select the COM port to be used for connection and press the "Next" button. Now the modem is available on the installed modem list.
- c) From the same ("Add Hardware Wizard") window select the installed modem and press the "Properties" button to open a further window where selecting the "Modem" tab and changing the "Maximum port speed" to 115200. Then, press the "Ok" button and close all windows to return to Control Panel.
- d) From Control Panel choose "Network Connections" to open the related "New Connection Wizard" window. From this window press the "Next" button, choose "Set Up an advanced Connection" and press "Next" again. Then, choose "Accept Incoming Connections", press "Next", choose "Communications cables between two computers" and press "Next" again. Choose if VPN connections are allowed and press "Next". Then, it is necessary to select one or more users which can access the computer or eventually insert a new one through the "Add" button. Then press "Next" twice to complete the connection.

#### 2 - Mobile Computer Settings

Follow the procedure to define the connection settings:

- a) From the device desktop activate "Control Panel", then "Network and Dial-up connections" and choose "Make New Connection". From this window type your

connection name, select “Direct Connection” and press “Next”. From the device list select “Serial cable on COM1” and change the communication speed under “Configure” to 115200 baud. Then, press “Security Settings” and select the “Preview user name and password” flag. Press “Finish” to save the configuration and close all windows.

### 3 - PC Connection

Follow the procedure to start the connection from the PC side:

- a) Connect the device cradle to the PC through a serial cable (refer to the cradle Instruction Manual);
- b) Share the desired directories as if working in a typical network connection.

### 4 - Mobile Computer Connection

Follow the procedure to start the connection from the mobile computer side:

- a) Insert the mobile computer into the cradle.
- b) Activate “Control Panel”->“Network and Dial-up connections”->“<your connection name>”. Within the “Enter Network Password” window insert user name and password (among those allowed in step d) of the PC Settings procedure) and press the “Ok” button. If the connection succeeds, the “Connected” message will appear within the “<your connection name>Status” window.
- c) Activate “My Device”; then, select “Address Bar” from the “View” menu, insert \\<host name> and press “Enter” from the keyboard. Insert user name, password and host domain within the new window.

Now, the directory list will display those directories previously shared by the PC. All directories can be managed as if working in a typical LAN connection.

### 3.9.3 Bluetooth® Manager Device Setup

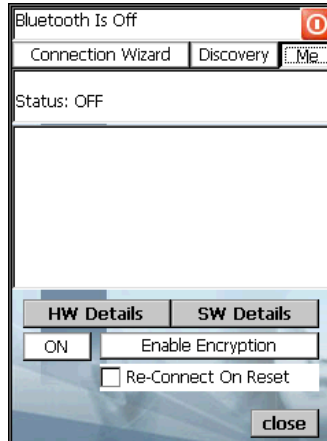
#### Windows CE Bluetooth® Manager Device Setup

In order to enable a Bluetooth® device for communication with the Datalogic Skorpio™ you must perform the discovery procedure and enable the device as follows:

1. Place the Bluetooth® device within the range of the Datalogic Skorpio™ (10 meters).
2. From the “Control Panel” main window double tap on the “Bluetooth” applet to open the Bluetooth® Manager Device window:

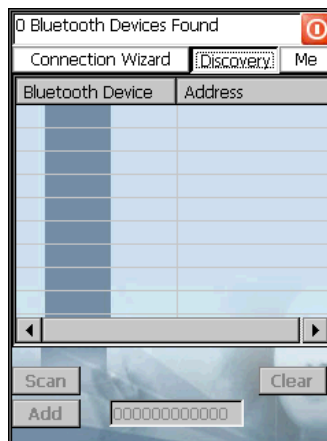


3. Tap on the “Me” button to enter the related window; then, tap on the “ON” button to activate the Bluetooth® module. The module activation may be also performed by using the WIRELESS COMMUNICATION applet as described in par. 3.8.4.



By tapping on the “HW Details” and “SW Details” buttons, information about the mobile computer Bluetooth® hardware and software will be displayed, while the “Enable Encryption” button starts encryption of the Bluetooth® communication data. If tapping on the “Close” button the Bluetooth® Manager Device window will be closed.

4. Tap on the “Discovery” button to enter the related window; then, tap on the “Scan” button to run the Discovery procedure:



Once the Discovery procedure has been completed, select the desired Bluetooth® device from the list. It is also possible to digit (12 hexadecimal digits) the Bluetooth® address of the desired device by tapping on the “Add” button. The “Clear” button deletes all discovered devices from the list.

5. Once the desired Bluetooth® device has been selected, tap on the “Connection Wizard” button to enter the related window where selecting the connection type to be used for communication with the Bluetooth® device:




The “Serial Port” button starts communication through the Bluetooth® serial port COM 5.

The “Printer” button starts communication with a printer through the Bluetooth® serial port COM 5.

The “Kbd Emulation” button allows connection with a barcode reader using the keyboard emulation.

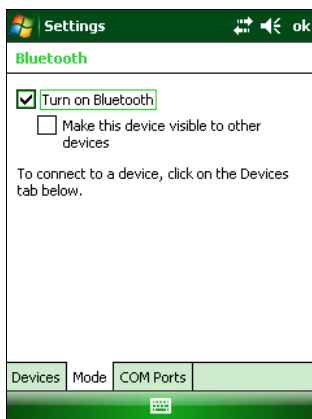
The “ActiveSync” button starts communication with a PC equipped with a Bluetooth® antenna and the related ActiveSync.

6. Hide the Bluetooth® Manager Device window by tapping on the  icon available on each window or close it through the “Close” button available in the “Me” window (see step 3 of this procedure).

## Windows Mobile Bluetooth® Manager Device Setup

Before turning on Bluetooth®, ensure that the two devices are within close range and that both Bluetooth-enabled devices are discoverable.

1. Tap Start -> Settings -> Connections tab.
2. Tap Bluetooth > Mode
3. Select or clear the “Turn on Bluetooth” check box:



### NOTE

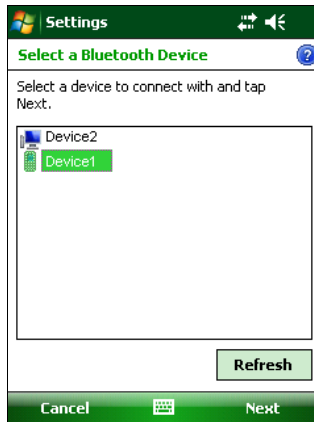
*By default, Bluetooth® is turned off. If you turn it on, and then turn off your device, Bluetooth® also turns off. When you turn on your device again, Bluetooth® turns on automatically.*

To create a Bluetooth® partnership between your device and another device that has Bluetooth® capabilities, ensure that the two devices are turned on, discoverable, and within close range.

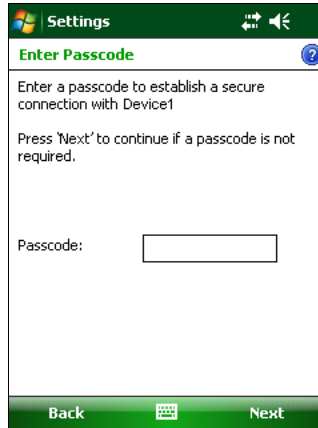
1. Tap Start -> Settings -> Connections tab.
2. Tap Bluetooth -> Devices tab -> Add new devices. Your device searches for other devices with Bluetooth® capabilities, and displays them in the list:



3. Tap the name of the other device, and tap Next:



4. In Passkey, if you want to use a passkey (recommended for enhanced security), enter a alphanumeric passkey between 1 and 16 characters, and tap Next. Otherwise, leave the passkey blank, and tap Next:



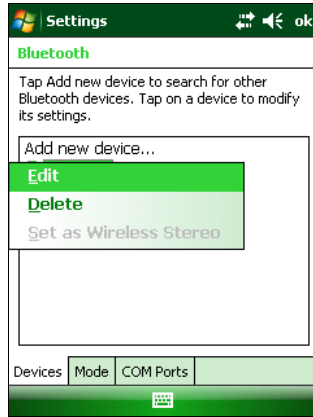
5. Enter the same passkey on the other device.
6. To give the partnership a more meaningful name, change the name of the device in Name.
7. Tap Finish.

You can give a more meaningful name to a Bluetooth® partnership to help you recognize it when selecting from a list of partnerships.

1. Tap Start -> Settings -> Connections tab.
2. Tap Bluetooth > Devices tab.
3. Tap the partnership to rename.
4. In Name, enter a new name for the partnership.
5. Tap Finish.

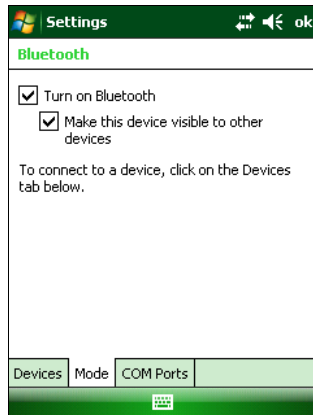
To end a Bluetooth® partnership:

1. Tap Start -> Settings -> Connections tab.
2. Tap Bluetooth > Devices tab.
3. Tap and hold the partnership you want to end.
4. Tap Delete:



Other devices with Bluetooth® capabilities can detect your device and attempt to beam information to it, establish a partnership, or use a Bluetooth® service. To make a device discoverable:

1. Tap Start -> Settings -> Connections tab.
2. Tap Bluetooth > Mode Tab.
3. Select the “Turn on Bluetooth” check box, and then select the “Make this device visible to other devices” check box:

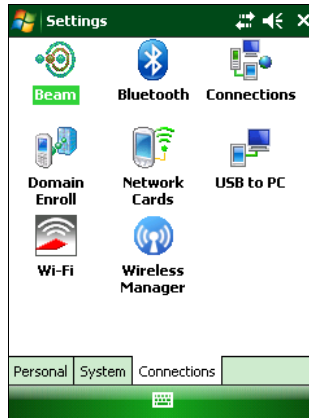


Other Bluetooth®-enabled devices can now detect your phone and attempt to beam information to it, establish a Bluetooth® partnership, or use a Bluetooth® service.

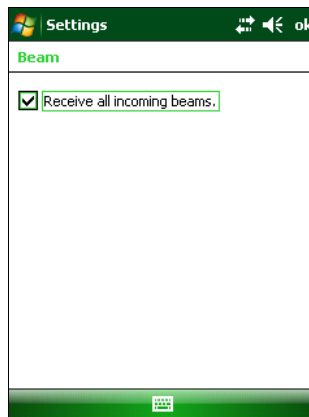
If you no longer want your device to be discoverable, clear the “Make this device visible to other devices” check box.

Your device will not detect and notify you of incoming Bluetooth® beams unless you set it up to do this. To receive a Bluetooth® beam:

1. Tap Start -> Settings -> Connections tab -> Beam:



2. Select the “Receive all incoming beams” check box:



3. Ensure that your device is turned on, discoverable, and within close range of the device that is beaming the information.

When prompted to receive an incoming beam, tap “Yes” to receive the beamed information.

### 3.9.4 FTP Server Setup

The Datalogic Skorprio™ Windows CE Operating System includes a sample File Transfer Protocol (FTP) server. FTP is used for copying files to and from remote computer systems over a network using TCP/IP. You can establish a connection to your Datalogic Skorprio™ using its FTP Server through the following interfaces:

**WLAN** using the WiFi radio

**LAN** through the Datalogic Skorprio™ Single Cradle Ethernet or the Datalogic Skorprio™ Ethernet Multi Cradle (see par. 3.8.5)

Proceed as follows:

1. Create a registry file (extension .reg) to setup and enable FTP Server communication. A simple example file for anonymous logon is given below:

```
REGEDIT4

[HKEY_LOCAL_MACHINE\Comm\FTPD]
"DefaultDir"="\\"
"AllowAnonymousUpload"=dword:00000001
"UseAuthentication"=dword:00000000
"BaseDir"="\\"
"IsEnabled"=dword:00000001
"LogSize"=dword:00001000
"DebugOutputMask"=dword:00000017
"DebugOutputChannels"=dword:00000002
"IdleTimeout"=dword:0000012c
"AllowAnonymous"=dword:00000001
"AllowAnonymousVroots"=dword:00000001
```

2. Copy this file to the Datalogic Skorprio™ using ActiveSync® or the RS232 protocol (par. 3.9.2).
3. Launch the .reg file from the Datalogic Skorprio™.
4. Perform a warm boot on the Datalogic Skorprio™.
5. From the PC > Explorer address bar (or running an FTP Client from the PC), enter the Datalogic Skorprio™ IP address.

**NOTE**

*For more information on FTP Client/Server connections refer to the following web page:*

*<http://msdn2.microsoft.com/en-us/library/aa922316.aspx>*

**NOTE**

*Datalogic Skorpion™ Wi-Fi models only (without Bluetooth®) do not contain the FTP Server. If necessary you can install it from the CD-ROM in the Utilities folder.*

### 3.10 BACKUP DIRECTORY FILE MANAGEMENT

All of the Windows CE system files reside in RAM (volatile memory) except for the Backup directory, which resides in FLASH (non-volatile memory). Therefore the contents of the Backup directory are persistent even if the mobile computer is re-booted or the battery pack is changed.

You can save your more important files that you don't want to lose due to mobile computer re-boot, in the Backup directory or create a sub-directory within Backup.

Even though the Windows Directory resides in RAM, it often contains files or sub-directories created by the user or by installation programs that you don't want to lose at re-boot. To keep these files persistent it is necessary to copy them to the directory \Backup\Windows. This directory doesn't exist originally (only Backup exists), and therefore it must be created. At the next cold boot, before activating the shell, Windows CE will copy the contents including all sub-directories of \Backup\Windows to \Windows.

Likewise, to maintain files that must be run at Windows CE startup, (i.e. .exe, .lnk, .vb, .htm, etc.), it is necessary to copy them to the directory \Backup\Startup. This directory does not exist originally (only Backup exists), and therefore it must be created. The application programs will be run after any type of re-boot (both warm and cold boot).

As an alternative to the Safe Setup function, it is possible to copy the .cab files to the directory \Backup\Cabfiles (the Cabfiles sub-directory doesn't exist originally and must therefore be created) and perform a mobile computer cold boot to have the application installed. Once these files are copied to the directory \Backup\Cabfiles, the application will be run after each re-boot.

From the second cold boot on, a message may be displayed such as "<application name> is already installed. Re-install?". This message blocks the boot process. Press the [Enter] key to continue the system initialization.

Even if the entire Windows Mobile file system reside in FLASH (non-volatile memory), the mechanism described above is supported also on Windows Mobile for backward compatibility.

### **3.11 FIRMWARE UPDATE FOR WINDOWS CE**

The Datalogic Skorpio™ is equipped with a tool that implements a firmware update service.

For further information, refer to DFU Reference Guide.

## 4 MAINTENANCE

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**NOTE**

*Rechargeable battery packs are not initially charged. Therefore the first operation to perform is to charge them. See below.*



**CAUTION**

*By default, the battery pack is disconnected at the factory to avoid damage due to excessive draining. Annual replacement of rechargeable battery pack avoids possible risks or abnormalities and ensures maximum performance.*

### 4.1 CHARGING THE BATTERY PACK

The battery pack autonomy varies according to factors, such as the frequency of barcode scanning, RF usage, etc.

When the battery pack is low, the LED positioned at the right side of the display blinks red.

It is possible to recharge the battery pack by using the PG5-20 MiniUSB AC/DC Power Supply directly connected to the Datalogic Skorpion™.

Alternatively, it is also possible to recharge the battery pack by using one of the Datalogic Skorpion™ single or multiple cradles.

During the charging process the LED positioned at the right side of the display is red constant. Once the charging process has been completed this LED is green constant (see par. 3.6).

If the battery pack is removed from the mobile computer, it can be recharged by inserting it into the MBC8600 Multi-Battery Charger.



**NOTE**

*The battery pack autonomy varies according to many factors, such as the frequency of barcode scanning, RF usage, battery life, storage, environmental conditions, etc.*

**CAUTION**

*If the battery pack is new or has not been recharged for a long time, it is necessary to perform two or three charging and discharging cycles (complete use) before it can reach its maximum charge capability.*

*The maximum time required to recharge a completely run-down battery pack is 4 hours if recharged into the mobile computer.*

**NOTE**

*Even if the storage temperature range is wider, In order to achieve the longest battery life, store the terminal and the spare batteries between 20 to 30 °C (68 to 86 °F).*

*The Batteries must be charged at a temperature ranging from 0° to +45 °C (+32° to +113 °F).*

## 4.2 REPLACING THE BATTERY PACK

### 4.2.1 Datalogic Skorpion™ Models

To correctly replace the battery pack, proceed as follows.

1. Turn off the Datalogic Skorpion™.
2. Turn the battery lock screw to the open position (horizontal), then pull the lock runner up, as indicated in the figure below.



3. Remove the battery pack.



4. To correctly insert the new battery pack, first insert the bottom and then the upper part of the battery pack into the slot as indicated in the following figure:



5. Press it until the battery latch is automatically closed.

#### 4.2.2 Datalogic Skorpio-GUN™ Models

To correctly replace the battery pack, proceed as follows.

1. Turn off the Datalogic Skorpio-GUN™.
2. Remove the battery pack, by pulling the battery latch down.





3. To correctly insert the new battery pack, first insert the bottom and then the upper part of the battery pack into the slot as indicated in the following figure:



4. Press it until the battery latch is automatically closed.

**WARNING**

*Installing, charging and/or any other action should be done by authorized personnel and following this manual.*

*The battery pack may get hot, explode, ignite, and/or cause serious injury if exposed to abusive conditions.*

*If the battery pack is replaced with an improper type, there is risk of explosion.*

*Do not place the battery pack in or near a fire or heat; do not place the battery pack in direct sunlight, or use or store the battery pack inside unventilated areas in hot weather; do not place the battery pack in microwave ovens, dryer, high pressure containers, on induction cookware or similar device. Doing so may cause the battery pack to generate heat, explode or ignite. Using the battery pack in this manner may also result in a loss of performance and a shortened life expectancy.*

*Use only a Datalogic Mobile approved power supply. The use of an alternative power supply will void the product warranty, may cause product damage and may cause heat, explode or ignite.*

*The area in which the units are charged should be clear of debris and combustible materials or chemicals.*

*Do not use the battery pack of this terminal for power devices different from this mobile computer.*

*Immediately discontinue use of the battery pack if, while using, charging or storing the battery pack, the battery pack emits an unusual smell, feels hot, changes colour or shape, or appears abnormal in any other way.*

*Do not short-circuit the battery pack contacts connecting the positive terminal and negative terminal. This might happen, for example, when you carry a spare battery pack in your pocket or purse; accidental short-circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the contacts of the battery pack (these look like metal strips on the battery pack). Short-circuiting the terminals may damage the battery pack or the connecting object.*

*Do not apply voltages to the battery pack contacts.*

**WARNING**

*Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.*

*Do not disassemble or modify (i.e. bend, crush or deform) the battery pack. The battery pack contains safety and protection devices, which, if damaged, may cause the battery pack to generate heat, explode or ignite.*

*In case of leakage of liquid from the battery, avoid contact with liquid the skin or eyes. If the contact occurs, immediately wash the affected area with water and consult a doctor.*

*Do not solder directly onto the battery pack.*

*Do not expose the battery pack to liquids.*

*Avoid any knocks or excessive vibrations. If the device or the battery is dropped, especially on a hard surface, you should take it to the nearest Authorised Repair Centre for inspection before continuing to use it.*

*Do not replace the battery pack when the device is turned on.*

*Do not remove or damage the battery pack's label.*

*Do not use the battery pack if it is damaged in any part.*

*Battery pack usage by children should be supervised.*

*Collect and recycle waste batteries separately from the device in comply with European Directive 2006/66/EC, 2002/95/EC, 2002/96/EC and subsequent modifications, US and China regulatory and others laws and regulations about environment.*

**NOTE**

*In order to guarantee an adequate operating autonomy, when replacing the battery pack the mobile computer checks the battery energy level. If the battery is not sufficiently charged, Datalogic Skorpio™ does not turn on (when pressing the ON button). In this case, either substitute the battery pack with a charged one (sufficiently charged) or insert Datalogic Skorpio™ into a powered cradle or plug it into the direct power supply.*

**NOTE**

*Due to a large internal capacitor, Datalogic Skorpio™ can remain on for about two minutes with no loss of data in the volatile memory, for example when replacing the battery pack.*

**NOTE**

*To achieve the best battery life, turn off the radios not in use.*

### 4.3 COMPACT FLASH AND SECURE STORAGE CARDS

The Datalogic Skorpio™ supports both Compact Flash and Mini Secure Digital storage cards.

The Mini SD storage card slot accepts storage cards only, while the Compact Flash card slot accepts either a storage card or the 802.11b/g radio card.

To install a Compact Flash, it is recommended to contact a Datalogic representative for technical assistance since to access the card slot it is necessary to open the mobile computer by removing its screws and causes warranty loss.

The Mini Secure Digital storage card can be installed by removing the battery, without opening the mobile computer see par. 1.4.



**CAUTION**

*Opening the Datalogic Skorpio™ may damage internal components.*

### 4.4 CLEANING THE MOBILE COMPUTER

Periodically clean the Datalogic Skorpio™ with a slightly dampened cloth.

Do not use alcohol, corrosive products or solvents.

## 5 TECHNICAL FEATURES

### 5.1 TECHNICAL DATA

<b>Electrical Features</b>			
Power			
DC supply		5.25 V ± 6%	
Battery pack		Datalogic Skorpion™ only: 1 cell Li-Ion 2100 mAh@ 3.7 V (7.8 Watt-hours) Datalogic Skorpion™-GUN only: 1 cell Li-Ion 3300 mAh@3.7 V (12.2 Watt-hours)	
<b>Communication Features</b>		<b>Windows CE COM Port</b>	<b>Windows Mobile COM Port</b>
Bluetooth interface		COM5	COM5
Serial interface	RS232	COM1	COM1
	USB 1.1	COM6	COM6
<b>Wireless Features</b>			
WLAN		IEEE 802.11b/g (WiFi)	
WPAN		Bluetooth® IEEE 802.15, Class 2, Version 1.2	
<b>Hardware Features</b>			
FLASH		512 MB	
RAM		128 MB	
Microprocessor		Intel X-Scale PXA-270 @ 520 MHz	
Audio		Speaker, Microphone	
LED		Two-color Good Read/Programmable LED Charging Status (two-color LED)	
Display		65K Color TFT LCD, 2.8", 320 x 240 pixel resolution (QVGA), with LED backlight and touch screen, transfective lighting, antiglare and antiscratch protection	
Keyboard		38 Rubber Keys (alphanumeric models) 28 Rubber Keys (numeric models)	

<b>Environmental Features</b>	
Working temperature**	-10° to + 50 °C / 14° to +122 °F
Storage temperature	-20° to +70 °C / -4° to +158 °F
Humidity***	90% non condensing for temperatures<40°C
Protection	IP64
ESD protection	4 KV contact discharge, 8 KV air discharge
Drop resistance****	1.5 m / 5 ft
<b>Mechanical Features</b>	
Dimensions (LxWxH)	Datalogic Skorpio™ only: 19.6 x 7.7 x 3.3 cm / 7.7 x 3.0 x 1.3 in Datalogic Skorpio-GUN™ only: 19.6 x 7.7 x 15.8 cm / 7.7 x 3.0 x 6.2 in
Weight (depending on model)	Datalogic Skorpio™ only: 310 - 360 g / 10.9 - 12.7 oz (incl. battery) Datalogic Skorpio-GUN™ only: about 560 g / 19.7 oz (incl. battery)

\*\* Close to the limits of the working temperature, some display and/or battery performance degradation may occur.

\*\*\* Multiple rapid humidity and/or temperature variations may cause condensing.

\*\*\*\* Multiple drops can permanently damage the device.

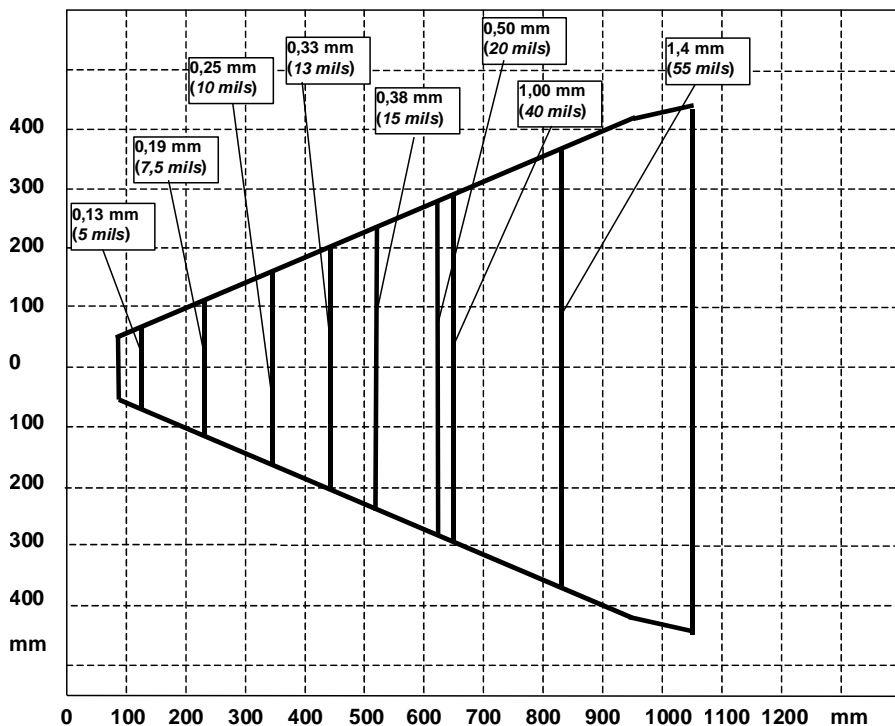
<b>Programming Features</b>		
Operating system*	Windows CE 5.0 Professional / Windows Mobile 6.1 Professional	
<b>Laser Models</b>		
Decoded barcodes 1D	UPC A, UPC E, EAN 8, EAN 13, Code 39, Code 39 Full ASCII, Code 32, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Code 128, EAN 128, Codabar, MSI, Plessey, Code 93, Code 11	
<b>Laser Optical Features</b>	<b>7XX-9XX/ 5XX-9XX</b>	<b>7XX-2XX</b>
Maximum resolution	0.10 mm / 4 mils	0.25 mm / 10 mils
Skew angle	± 50°	
Pitch angle	± 65°	
Scan rate - bidirectional	104 ± 12 scan/sec	35 ± 5 scan/sec
Light source laser scanner	VLD, wavelength in the range 630 to 680 nm	
Safety class	Class II EN 60825-1/CDRH	

\* Depending on models.

## 5.2 READING DIAGRAMS

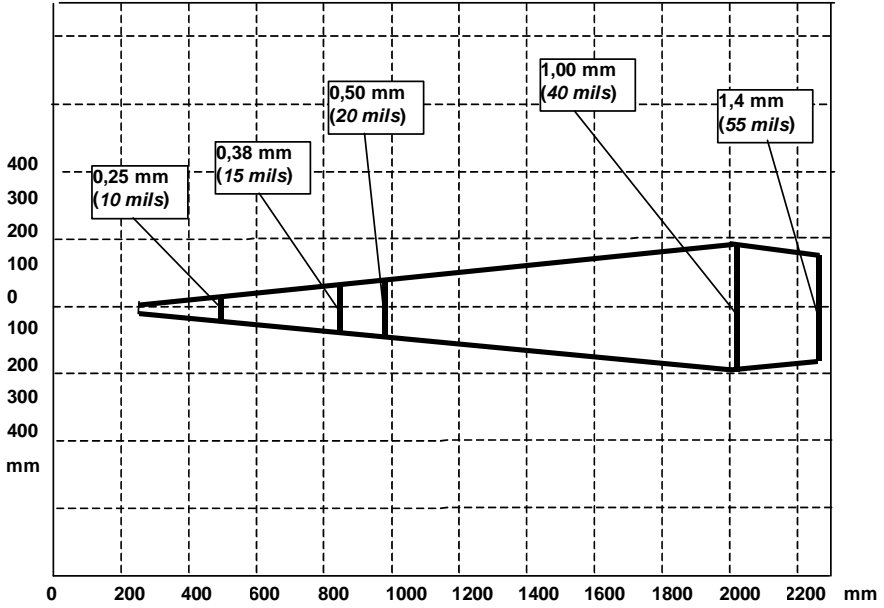
### Datalogic Skorpio™ and Datalogic Skorpio-GUN™ XXX-9XX

Guaranteed Reading Diagram at 47° - Reading Zones (10° skew angle)



Datalogic Skorpio-GUN™ XXX-2XX only

Guaranteed Reading Diagram - Reading Zones (10° skew angle)



## 6 TEST CODES

---

### High Density Codes

0.25 mm (10 mils)

Code 39



17162

2/5 Interleaved



0123456784

Code 128



test

EAN 13

80%



8 012345 000012

EAN 8

80%



6450 9723

### Medium Density Codes

0.38 mm (15 mils)

Code 39



17162

Interleaved 2/5



0123456784

Code 128



test

---

EAN 13



8 012345 000012

EAN 8



6450 9723

## Low Density Codes

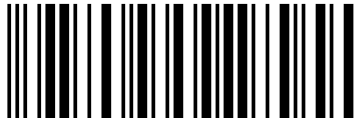
0.50 mm (20 mils)

Code 39



17162

Interleaved 2/5



0123456784

Code 128



test

---

EAN 13



8 012345 000012

EAN 8



6450 9723

# GLOSSARY

---

## **Access Point**

A device that provides transparent access between Ethernet wired networks and IEEE 802.11 interoperable radio-equipped mobile units. Hand-held mobile computers, PDAs or other devices equipped with radio cards, communicate with wired networks using Access Points (AP). The mobile unit (mobile computer) may roam among the APs in the same subnet while maintaining a continuous, seamless connection to the wired network.

## **Barcode**

A pattern of variable-width bars and spaces which represents numeric or alphanumeric data in binary form. The general format of a barcode symbol consists of a leading margin, start character, data or message character, check character (if any), stop character, and trailing margin. Within this framework, each recognizable symbology uses its own unique format.

## **Baud Rate**

A measure for data transmission speed.

## **Bit**

Binary digit. One bit is the basic unit of binary information. Generally, eight consecutive bits compose one byte of data. The pattern of 0 and 1 values within the byte determines its meaning.

## **Bluetooth®**

A standard radio technology using a proprietary protocol. The onboard Bluetooth module in the mobile computer is compatible with the 1.2 protocol.

## **Byte**

On an addressable boundary, eight adjacent binary digits (0 and 1) combined in a pattern to represent a specific character or numeric value. Bits are numbered from the right, 0 through 7, with bit 0 the low-order bit. One byte in memory can be used to store one ASCII character.

## **Decode**

To recognize a bar code symbology (*e.g.*, Codabar, Code 128, Code 3 of 9, UPC/EAN, etc.) and analyze the content of the bar code scanned.

**DHCP**

Dynamic Host Configuration Protocol. A set of rules used by a device (such as a computer, router or networking adapter) to request and obtain an Internet address from a server which has a list of addresses available for assignment.

**EEPROM**

Electrically Erasable Programmable Read-Only Memory. An on-board non-volatile memory chip.

**Flash Disk**

Non-volatile memory for storing application and configuration files.

**Host**

A computer that serves other mobile computers in a network, providing services such as network control, database access, special programs, supervisory programs, or programming languages.

**Liquid Crystal Display (LCD)**

A display that uses liquid crystal sealed between two glass plates. The crystals are excited by precise electrical charges, causing them to reflect light outside according to their bias. They use little electricity and react relatively quickly. They require external light to reflect their information to the user.

**Light Emitting Diode (LED)**

A low power electronic light source commonly used as an indicator light. It uses less power than an incandescent light bulb but more than a Liquid Crystal Display (LCD).

**RAM**

Random Access Memory. Data in RAM can be accessed in random order, and quickly written and read.

**RF**

Radio Frequency.

**RTC**

Real Time Clock.

# INDEX

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AND SERVICES; PART 17: SPECIFIC CONDITIONS FOR 2,4GHZ WIDEBAND  
TRANSMISSION SYSTEMS AND 5GHZ HIGH PERFORMANCE LAN EQUIPMENT
- ETSI EN 300 328 v1.7.1, OCTOBER 2006 :** ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM);  
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- EN 60950-1, DECEMBER 2001 :** INFORMATION TECHNOLOGY EQUIPMENT - SAFETY -  
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- EN 50392:2004 :** GENERIC STANDARD TO DEMONSTRATE THE COMPLIANCE OF ELECTRONIC AND  
ELECTRICAL APPARATUS WITH THE BASIC RESTRICTIONS RELATED TO HUMAN  
EXPOSURE TO ELECTROMAGNETIC FIELDS (0 MHZ - 300 GHZ).

Lippo di Calderara, February 18th, 2009



Paola Chientaroli  
Quality Assurance Manager

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