#### 3.6 DATA CAPTURE CONFIGURATION

From the Taskbar, tap the "Data Capture" icon to open a drop-down menu. Data Capture 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.

# 3.6.1 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.).

The Scan Parameters are common to all scanner modules and allow control of the scanning device (i.e. LED control, laser timeout, etc.).

Each Data Capture screen window corresponds to a branch of the tree, and the name of the current branch is displayed at the bottom of each screen window.



**Data Capture Configuration Window** 

The screen format shows two columns where the left column indicates branches or parameters. Branches have three dots in the right column (...). You can navigate through the tree structure using the stylus or keyboard arrows directly on the item field or from the menu.

Parameters have their corresponding current values in the right column. You can edit parameter values using the stylus or keyboard arrows directly on the item field or from the menu. To change a value for example, select the line of the value to be changed, choose Edit from the Parameter Menu then choose a new value from the values listed in the box (see following figures).





**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.

**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.

ContinuousMode: disables the effect of the ScanTimeout parameter.

**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.

**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.

**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.

# **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.

SCAN PARAMETERS	
ScanTimeout	5000
GoodReadSound	Beep.wav
LedDuration	200 mS
LedPulses	1
GreenSpotDuration	1000
ContinuousMode	Disabled
KeyboardEmulation	Disabled
SoftTrigger	Enabled
ScanAlwaysOn	Disabled

BARCODE SYMBOLOGY SPECIFIC READER PARAMETERS	
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

BARCODE SYMBOLOGY SPECIFIC READER PARAMETERS	
MSI	Enabled
Plessey	Disabled
Code 93	Disabled
Code 11	Disabled

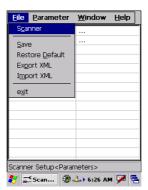
# 3.6.2 Capture

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** 

### 3.7 CONTROL PANEL

From the Desktop, 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 APPLET.



**Control Panel** 

### **3.7.1** Buttons

The BUTTONS Applet allows assigning desired applications to be launched by one of the function keys (F1, F2, F3, F4).



You can also select to wake up the terminal by the SCAN key.

### 3.7.2 Registry

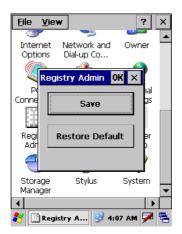
The REGISTRY ADMIN applet provides management of Windows CE registry.

Select the REGISTRY ADMIN applet by double 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 software reset.

Saving the registry to non-volatile memory guarantees the persistence of the Windows configuration in case of battery pack replacement.



**Registry Administration Window** 

### 3.7.3 Files Admin

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

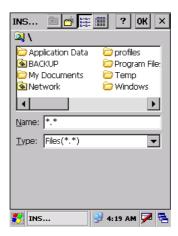
These current working session files will be backed-up in the \Backup\Windows directory.

At the next hardware reset, the files previously saved in the \Backup\Windows directory will be restored to the Windows directory (see par. 3.9).

**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 hardware reset, these files will be restored (see par. 3.9).

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<sup>®</sup> 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.



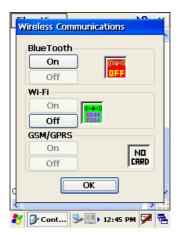
Safe Setup Second Mask

#### **Wireless Communications** 3.7.4

The WIRELESS COMMUNICATIONS applet provides management of the Wi-Fi Card and of the Bluetooth  $^{\rm @}$  module.



Select the WIRELESS COMMUNICATIONS applet by double tapping the Wireless Communications icon. The following window will appear:



**Wireless Communications Window** 



NOTE

In order to avoid wasting power, all modules are off by default.

### 3.7.5 Ethernet Settings

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



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 Ethernet Multi Cradle, the Ethernet driver installed on the mobile computer will automatically run, and using the DHCP service, will dynamically assign the IP Address.

- From the Datalogic Skorpio<sup>™</sup> open Internet Explorer>Internet Options and check use LAN no autodial then OK.
- 2. From the Datalogic Skorpio<sup>™</sup> > Explorer, enter the IP address in the address bar (or name), of the PC on the network that you want to communicate with. You may be required to enter your network username and password. The LAN connection will take place and you can see the PC shared folders.

You can download files from the PC to Datalogic Skorpio<sup>™</sup> but not vice versa. To do this use an FTP connection (see par. 3.8.4).

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.

IP Information IPv6 Information

Internet Protocol (TCP/IP)

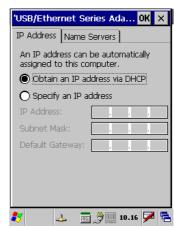
Address Type: DHCP
IP Address:
172.16.6.225
Subnet Mask:
255.255.0.0
Default Gateway:

LAN icon

Renew

Details...

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 Ethernet Multi Cradle.



Ethernet LANNDS1 Communications Window

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

#### 3.8 WINDOWS CONNECTIONS

To connect Datalogic Skorpio™ to another device (i.e. Host PC) from Windows, several programs are available in the "Connections" folder on the Datalogic Skorpio™ Desktop. These programs require specific electrical connections in order to function properly. From the Desktop, double tap on the "Connections" folder to open the following window:



Windows Connections

### 3.8.1 Microsoft® ActiveSync®

Microsoft® ActiveSync® gives you the possibility to connect your desktop computer to your Datalogic Skorpio $^{\text{TM}}$  and synchronize the information on them. Synchronization compares the data on the Datalogic Skorpio $^{\text{TM}}$  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 Skorpio™ data.
- Copy files between Datalogic Skorpio™ and desktop computer.
- Synchronize files by selecting a synchronization mode.

You can establish an ActiveSync<sup>®</sup> connection to your Datalogic Skorpio<sup>™</sup> through the following electrical interfaces:

**USB** either directly or through the Datalogic Skorpio™ Single USB Cradle

Bluetooth (see par. 3.8.3)



NOTE

If uploading/downloading files through a serial connection, Microsoft® ActiveSync® is not used. Refer to par. 3.8.2 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.



By default, ActiveSync<sup>®</sup> does not automatically synchronize all types of information. Use ActiveSync<sup>®</sup> 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.



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

http://www.microsoft.com/windowsmobile/activesync/default.mspx

### 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. 3.8.4.

# 3.8.2 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.



.

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:

- 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.

### 3.8.3 Bluetooth® Manager Device Setup

In order to enable a Bluetooth<sup>®</sup> device for communication with the Datalogic Skorpio $^{\text{TM}}$  you must perform the discovery procedure and enable the device as follows:

- Place the Bluetooth<sup>®</sup> device within the range of the Datalogic Skorpio<sup>™</sup> (10 meters).
- 2. From the "Connections" folder 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<sup>®</sup> module. The module activation may be also performed by using the WIRELESS COMMUNICATION applet as described in par. 3.7.4.



By tapping on the "HW Details" and "SW Details" buttons, information about the mobile computer Bluetooth<sup>®</sup> hardware and software will be displayed, while the "Enable Encryption" button starts encryption of the Bluetooth<sup>®</sup> communication data. If tapping on the "Close" button the Bluetooth<sup>®</sup> 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<sup>®</sup> device from the list. It is also possible to digit (12 hexadecimal digits) the Bluetooth<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> device:



The "Serial Port" button starts communication through the Bluetooth<sup>®</sup> 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<sup>®</sup> Manager Device window by tapping on the available on each window or close it through the "Close" button available in the "Me" window (see step 3 of this procedure).

## 3.8.4 FTP Server Setup

The Datalogic Skorpio™ 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 Skorpio™ using its FTP Server through the following interfaces:

WLAN using the WiFi radio

**LAN** through the Datalogic Skorpio<sup>™</sup> Ethernet Multi Cradle (see par. 3.7.5)

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:0000017
"DebugOutputChannels"=dword:0000002
"IdleTimeout"=dword:0000012c
"AllowAnonymous"=dword:00000001
"AllowAnonymousVroots"=dword:00000001
```

2. Copy this file to the Datalogic Skorpio<sup>™</sup> using ActiveSync<sup>®</sup> or the RS232 protocol (par. 3.8.2).

- 3. Launch the .reg file from the Datalogic Skorpio™.
- 4. Perform a software reset on the Datalogic Skorpio™.
- From the PC > Explorer address bar (or running an FTP Client from the PC), enter the Datalogic Skorpio™ IP address.



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

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



Datalogic Skorpio<sup>™</sup> xxx-xxx-433 and xxx-xxx-436 models do not contain the FTP Server. If necessary you can install it from the CD-ROM in the Utilities folder.

### NOTE

#### 3.9 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 rebooted 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 subdirectories 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 hardware reset, 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 software and hardware reset).

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 exists 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.

### **4 MAINTENANCE**



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

### 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 Skorpio™.

Alternatively, it is also possible to recharge the battery pack by using the Datalogic Skorpio™ Single USB Cradle or one of the Datalogic Skorpio™/F-COLOR cradles (even when not connected to the host).

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. 3.5).

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



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.

### 4.2 REPLACING THE BATTERY PACK

To correctly replace the battery pack, proceed as follows.

- 1. Turn off the Datalogic Skorpio™.
- 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.



Do not incinerate, disassemble, short terminals or expose to high temperature. Risk of fire, explosion. Use specified charger only. Risk of explosion if the battery is replaced by an incorrect type. Dispose of the batteries as required by the relevant laws in force.



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  $^{\mathsf{TM}}$  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  $^{\mathsf{TM}}$  into a powered cradle or plug it into the direct power supply.



NOTE

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

### 4.3 COMPACT FLASH AND SECURE STORAGE CARDS

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

The Mini Secure Digital storage card slot accepts storage cards only, while the Compact Flash card slot accepts either a storage card or a 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, while the Mini Secure Digital storage card can be installed by removing the battery, without opening the mobile computer.



Opening the Datalogic Skorpio™ may damage internal components.

### 4.4 CLEANING THE MOBILE COMPUTER

Periodically clean the Datalogic Skorpio<sup>™</sup> with a slightly dampened cloth.

Do not use alcohol, corrosive products or solvents.

# 5 TECHNICAL FEATURES

### 5.1 TECHNICAL DATA

Electrical Features				
Power				
DC supply	5.25 V ± 6%			
Battery pack	2 cell Li-lon 2100 mAh@ 3.7 V (7.8 Watt-hours)			
Communication Features	Windows CE COM Port			
Bluetooth interface		COM5		
Serial interface	RS232	COM1		
	USB 1.1	COM6		
Wireless Features				
WLAN	IEEE 802.11b or b/	g DSSS		
WPAN	Bluetooth® IEEE 8	02.15, Class 2, Version 1.2		
Hardware Features				
FLASH	64/128 MB *			
RAM	64/128 MB *			
Microprocessor	Intel X-Scale PXA-2	270 @ 312/520 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,			
	transflective lighting, antiglare and antiscratch			
I/ o , the o and	protection			
Keyboard	38 Rubber Keys			
Environmental Features	400 to 1 50 00 / 44	10 t- 1400 °F		
Working temperature**	-10° to + 50 °C / 14° to +122 °F			
Storage temperature	-20° to +70 °C / -4° to +158 °F			
Humidity Protection	90% non condensing for temperatures<40°C			
ESD protection	IP64			
Drop resistance	4 KV contact discharge, 8 KV air discharge 1.5 m / 5 ft			
Mechanical Features				
Dimensions (LxWxH)	19.6 x 7.7 x 3.3 cm / 7.7 x 3.0 x 1.3 in			
Weight (depending on model)	310 - 360 g / 10.9 - 12.7 oz (incl. battery)			
weight (depending on model)	310 - 300 g / 10.9 - 12.7 02 (IIIOI. Dattery)			

<sup>\*</sup> Depending on models.

<sup>\*\*</sup> Batteries must be charged at a temperature ranging from 0° to +45 °C (+32° to +113 °F). At temperatures below 0° and above + 45 °C display or battery performance degradation may occur.

Programming Features	
Operating system	Windows CE 5.0 Core/Professional
Laser Models	
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
Laser Optical Features	
Maximum resolution	0.10 mm / 4 mils
Skew angle	± 50°
Pitch angle	± 65°
Scan rate - bidirectional	104 ± 12 scan/sec
Light source laser scanner	VLD, wavelength in the range 630 to 680 nm
Safety class	Class II EN 60825-1/CDRH

# 5.2 READING DIAGRAM

# 6 TEST CODES

# **High Density Codes**

0.25 mm (10 mils)

Code 39

2/5 Interleaved



Code 128



test

**EAN 13** 



EAN 8



# **Medium Density Codes**

0.38 mm (15 mils)

Code 39



17162

Interleaved 2/5



Code 128



test

**EAN 13** 



EAN 8



### **Low Density Codes**

### 0.50 mm (20 mils)

Code 39



Interleaved 2/5



Code 128





**EAN 13** 



EAN 8

### **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.

#### **FFPROM**

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.

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#### Datalogic Mobile S.r.I. Via S. Vitalino 13 40012 - Lippo di Calderara Bologna - Italy



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ETSI EN 301 489-3 v1.4.1, August 2002: ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM);

ELECTROMAGNETIC COMPATIBILTY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART 3: SPECIFIC CONDITIONS FOR SHORT-RANGE DEVICES

(SRD) OPERATING ON FREQUENCIES BETWEEN 9kHz AND 40 GHz

ETSI EN 301 489-17 v1.2.1, August 2002: ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM);

ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART 17: SPECIFIC CONDITIONS FOR 2,4GHZ WIDEBAND TRANSMISSION SYSTEMS AND 5GHZ HIGH PERFORMANCE RLAN EQUIPMENT

ETSI EN 300 328 v1.6.1, November 2004: ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM);

WIDEBAND TRANSMISSION SYSTEMS; DATA TRANSMISSION EQUIPMENT OPERATING IN THE 2,4 GHZ ISM BAND AND USING WIDE BAND MODULATION TECHNIQUES; HARMONIZED EN COVERING ESSENTIAL REQUIREMENTS UNDER

ARTICLE 3.2 OF THE R & TTE DIRECTIVE

ETSI EN 300 330-2 v1.1.1, June 2001:

ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); SHORT RANGE DEVICES (SRD); RADIO EQUIPMENT IN THE FREQUENCY RANGE 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 KHZ TO 30 MHZ; PART 2: HARMONIZED EN UNDER ARTICLE 3.2 OF THE R&TTE DIRECTIVE

EN 60950-1, December 2001: Information technology equipment - Safety -

PART 1: GENERAL REQUIREMENTS

Lippo di Calderara, March 9th, 2007

Paola Chientonoli Quality Assurance Manager

