Datalogic JOYA™ X1 R2U
"Ready to Use"

User's manual

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Datalogic JOYA™ X1 BASIC R2U - User's Manual
Datalogic JOYA™ X1 PLUS R2U - User's Manual

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REFERENCES

CONVENTIONS

This manual uses the following conventions:

“JOYA™ X1” refers to both JOYA™ X1 Basic R2U mobile computer and to JOYA™ X1 Plus R2U mobile computer unless otherwise specified.
“User” refers to anyone using a Datalogic JOYA™ mobile computer.
“Mobile computer” and "Datalogic JOYA™" refer to Datalogic JOYA™ X1.
“You” refers to the System Administrator or Technical Support person using this manual to install, configure, operate, maintain or troubleshoot a Datalogic JOYA™ X1.
“Cradle” refers to Datalogic JOYA™ X1 Cradle Dispenser.

REFERENCE DOCUMENTATION

For further information regarding Datalogic JOYA™ X1 refer to the SDK Help on-Line.

SAFETY REGULATIONS

NOTE	*Read this manual carefully before performing any type of connection to the Datalogic JOYA™ X1 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 JOYA™ X1 being used.
- Do not attempt to disassemble the Datalogic JOYA™ X1 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 JOYA™ X1 mobile computer, disposal must be performed in compliance with the laws in force.
- Before using the device and the battery pack, see par. 0 and read every warnings about the device and the battery pack.
- Do not submerge the Datalogic JOYA™ X1 in liquid products.
- The Datalogic JOYA™ X1 is designed and labelled to be compliant with laws, rules and regulations in force in the countries where it is sold.
- For further information, refer to this manual and to the Datalogic ADC web site: http://www.adc.datalogic.com.

LED CLASS

LED illuminator integrated in the JOYA X1 models with SE-655 imager engine are compliant with exempt risk group requirements according to EN62471:2008 and IEC62471:2006.

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.

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://ec.europa.eu./ for further information.

ITALIANO

Prendi contatto con 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://ec.europa.eu./

FRANÇAIS

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http://ec.europa.eu./

DEUTSCH

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http://ec.europa.eu./

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http://ec.europa.eu./

FCC COMPLIANCE – JOYA X1

FCC Regulations:

• This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

• This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user‘s authority to operate the equipment.

• The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

RF EXPOSURE INFORMATION (SAR)

This device meets the government’s requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the poser required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

While there may be differences between the SAR levels of various devices and

at various positions, they all meet the government requirement.

For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum distance of 0 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on the below FCC IDs:
FCC ID: U4G0156

This device is compliant with SAR for general population /uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

INDUSTRY CANADA COMPLIANCE – JOYA X1

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

The County Code Selection feature is disabled for products marketed in the US/Canada.

IC Radiation Exposure Statement
This EUT is compliant with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528. This equipment can be installed and operated with minimum distance of 0 cm between the radiator & your body.

SAR COMPLIANCE

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

- The portable device Joya™ X1 from Datalogic is in compliance with the IC RSS 102 Issue 4 [RSS 102] and Federal Communications Commission (FCC) Guidelines [OET 65] for uncontrolled exposure. SAR assessment in body worn was conducted with the back of the device in direct contact against the flat phantom.
- The portable device Joya ™ X1 from Datalogic is in compliance European Standard EN 50566: Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)

FCC COMPLIANCE - JOYA CRADLE DISPENSER

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use this equipment. The device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation. This equipment 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.

INDUSTRY CANADA COMPLIANCE – JOYA CRADLE DISPENSER

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. This EUT is compliant with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528. This equipment should be installed and operated with minimum distance of 0 cm between the radiator & your body.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WIRELESS AND RADIO FREQUENCIES WARNINGS

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™.

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.

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

WARNING	*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.*

PATENTS

This product is covered by one or more of the following patents.
Design Pat.: EP 891,544; AU 323,628; US D 613,289 S; ZL 200830146270.9.
U.S. Pat. Nos: 5,992,740; 6,808,114 B1; 6,997,385 B2; 7,387,246 B2; 7,620,475 B2.
European Pat. Nos: 789,315 B1; 1,128,315 B1; 1,396,811 B1; 1,413,971 B1.
Additional patents pending.

WEEE COMPLIANCE

Informazione degli utenti ai sensi della Direttiva Europea 2012/19/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.ADC.datalogic.com.

Information for the user in accordance with the European Commission Directive 2012/19/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.ADC.datalogic.com.

Information aux utilisateurs concernant la Directive Européenne 2012/19/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:

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- 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.ADC.datalogic.com.

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- recuperar los materiales obteniendo así un ahorro importante de energía y recursos

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Benutzerinformation bezüglich Richtlinie 2012/19/EC der europäischen Kommission

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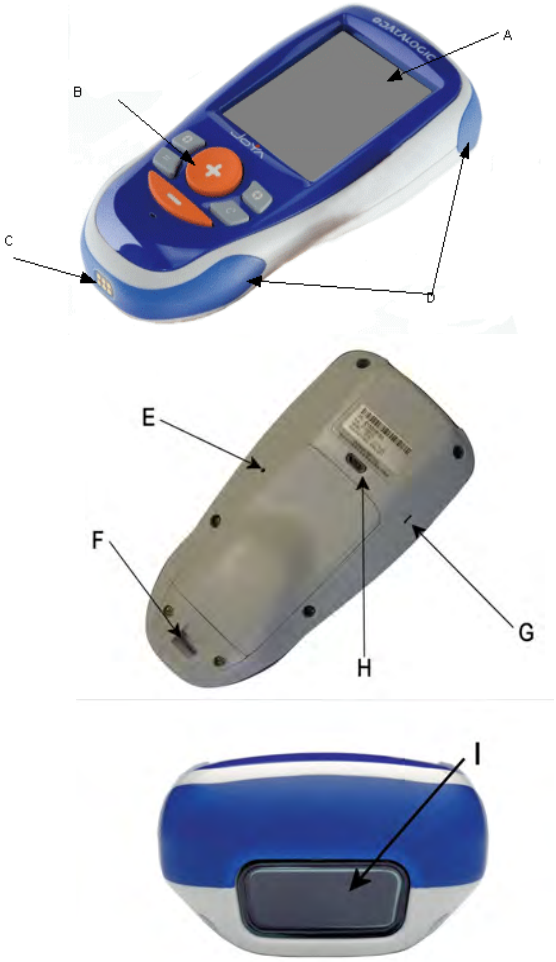
Beseitigung des Produkts entsprechend der Richtlinie:

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

Weitere Informationen zu dieser Richtlinie erhalten sie von ihrem Lieferanten über den sie das Produkt erworben haben, oder besuchen sie unsere Hompage unter www.ADC.datalogic.com.

GENERAL VIEW



A) Display *	D) Bumper	G) Loudspeaker
B) 6 keys keyboard	E) Cold reset Hole	H) Micro USB
C) TTL Serial connector	F) Neck Strip Anchor	I) Reader window

*Remove protective film cover before use

1 INTRODUCTION

1.1 DATALOGIC JOYA™ X1 DESCRIPTION

The Datalogic JOYA™ X1 is a pocket-sized Windows powered mobile computer.

This extremely compact, lightweight, and versatile device, combines fully integrated automatic data capture (1D bar code) and wireless communication capabilities, supporting nearly any application.

The Datalogic JOYA™ X1 system architecture is based on the blend of Intel X-Scale series processors coupled with the Windows CE operating system and it was developed to meet the most demanding customer needs.

A huge quantity of on-board memory is available. It enables the user to adapt the terminal for any specific need.

Thanks to its great ergonomics and the state of the art architecture, the Datalogic JOYA™ X1 is the right answer to enhance your business opportunities.

1.2 MODEL DESCRIPTION

The brand new Datalogic JOYA™ X1 is available in two different models depending on the options it is equipped with. All options are listed below:

- **911300073 JOYA™ X1 BASIC R2U (base model)**
- **911300074 JOYA™ X1 PLUS R2U (enhanced model)**

For further details about the Datalogic JOYA™ X1 models refer to the web site: http://www.JOYA.datalogic.com.

1.3 PACKAGE CONTENTS

The Datalogic JOYA™ X1 package contains:

– 1 Datalogic JOYA™ X1 mobile computer

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 initial operation to perform is to charge them.

1.4 ACCESSORIES

- **Cradle**

  912201000 Datalogic JOYA™ X1 Cradle Dispenser

- **Batteries**

  890002010 Datalogic JOYA™ X1 Battery Pack (10 pcs.)

  - **Cradle Accessories**

    91ACC1000 Power Supply 12V 300W

    91ACC0730 Power Junction Cable I90x/3 Cradle (8 pcs.)

    91ACC0650 Term. Unlock Magnets (5 pcs.)

  - **Various**

    94ACC1328 Datalogic JOYA™ X1 Stylus Pens (10 pcs)

    91ACC1056 Datalogic JOYA™ X1 trolley holder (60 pcs.)

    91ACC1057 Datalogic JOYA™ X1 checkout holder

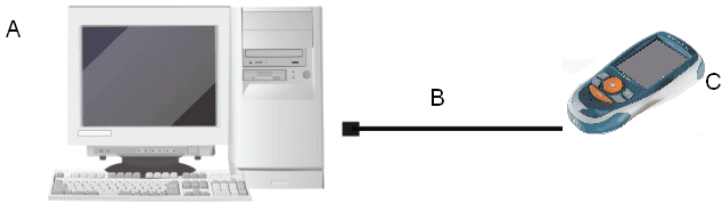
NOTE

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

2 CONNECTIONS

2.1 USB CONNECTION

You can use any standard micro USB cable to directly connect the Datalogic JOYA™ X1 to a host computer to transfer data through the USB interface.



Key:

A) Host Computer
B) Standard Micro USB cable type USB A – micro USB B
C) Datalogic JOYA™ X1

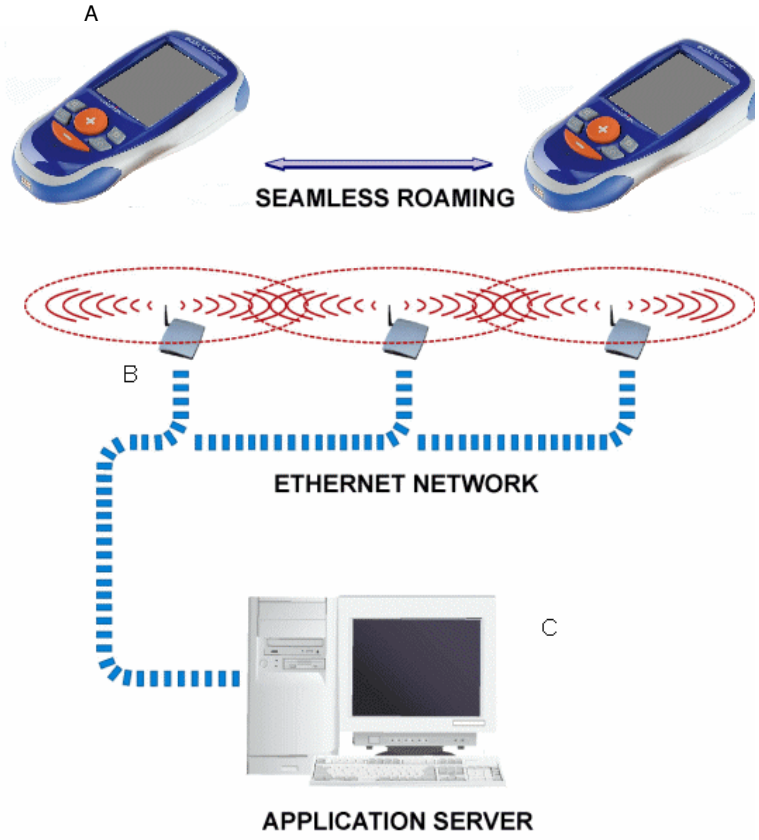
WARNING

To comply with the FCC rules the EMI ferrite filter Fair-Rite™ p.n. 0444164951) must be used and installed round the cable (see pictures below)

2.2 WLAN CONNECTION

Datalogic JOYA™ X1 Wi-Fi 802.11 b/g/n radio models can communicate with the host using the on-board radio frequency component and an Access Point connected to the host computer.

To launch this utility you can tap the specific icon if it's visible on the taskbar or you can open Connections folder or Control Panel from desktop and select the 'Summit Client Utility' icon.



Key:

A) Datalogic JOYA™ X1
B) Access Point
C) Host – Application Server

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/n radio and drops the radio connection. When the terminal resumes, depending on the radio power mode and security protocol selected, it may take up to 30 seconds for the 802.11b/g/n 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.)*

3 USE AND FUNCTIONING

The use of the Datalogic JOYA™ X1 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.
Furthermore there are two major utilities embedded in the software provided from factory:

- ScanToConfig
- Avalanche Enabler

3.1 STARTUP

The Datalogic JOYA™ X1 turns on when a charged battery pack is inserted.

As soon as the mobile computer is on, the “ScanToConfig” request screen appears and stays on for five seconds:

By pressing the “+” key, the reader beam is lit. By reading different predefined barcodes, different actions are performed. In particular it is possible to:

AVALANCHE-S2C

Start the Wavelink Avalanche Enabler-application interface (embedded);

TOOL-CRADLE

Start the "JOYA Cradle Tool" application if present in \BACKUP\CTOOLS;

TOOL-DIAGNOSTIC

Start “JOYA Diagnostic Tool" application if present in \BACKUP\CTOOLS;

DEV-HRD-RST

Perform a hardware reset;

DEV-SFT-RST

Perform a software reset;

DEV-SCAN-ON

Enable the reader trigger when the "+" key is pressed. Default is “enabled”;

A reset (either HW or SW) is required to confirm the choice.

DEV-SCAN-OFF

Disable the reader trigger when the "+" key is pressed.

A reset (either HW or SW) is required to confirm the choice.

When the ScanToConfig timeout expires, Windows CE desktop will appear on the screen. Wait a few seconds before starting any activity so that the mobile computer completes its startup procedure.

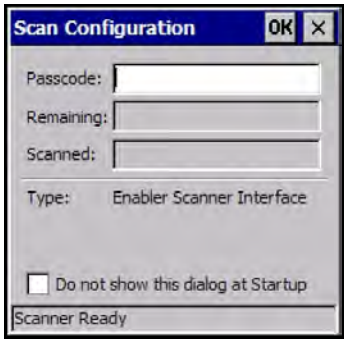
The mobile computer goes into power-off (low power with display and keyboard backlight off), when it is no longer used for more than a programmable timeout,

which is defined in the POWER applet of the Control Panel. In this mode it can be awakened (resuming operation) pressing the "**Up**" Key.

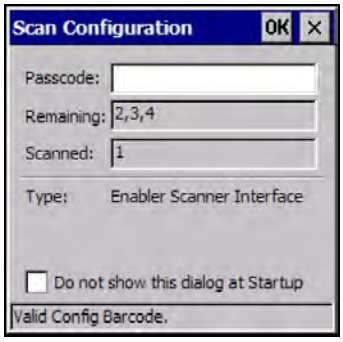
NOTE	*The mobile computer can also be awakened or turned off by the application program.*

3.2 AVALANCHE ENABLER

By scanning the AVALANCHE-S2C barcode, user can start the avalanche enabler interface. First screen ask for the barcode setup sequence



At this point, user must scan the previously generated barcodes to properly configure the radio interface. Barcodes can be scanned in any order, Scan Configuration screen will report about scanned and remaining barcodes.



Then Avalanche Enabler connects the server and downloads suitable information in term of "packages". These packages are previously created by using the Avalanche Package Builder.

3.3 WAVELINK AVALANCHE SYSTEM

Is a client management system that automatically deploys software and configuration updates to JOYA™ X1 Avalanche uses "push/pull" technology to install, update, and manage the software and configurations of JOYA™ X1 and other mobile devices. For detailed information please refer directly to the Wavelink website:

http://www.wavelink.com/

The Wavelink Avalanche system includes three primary components:

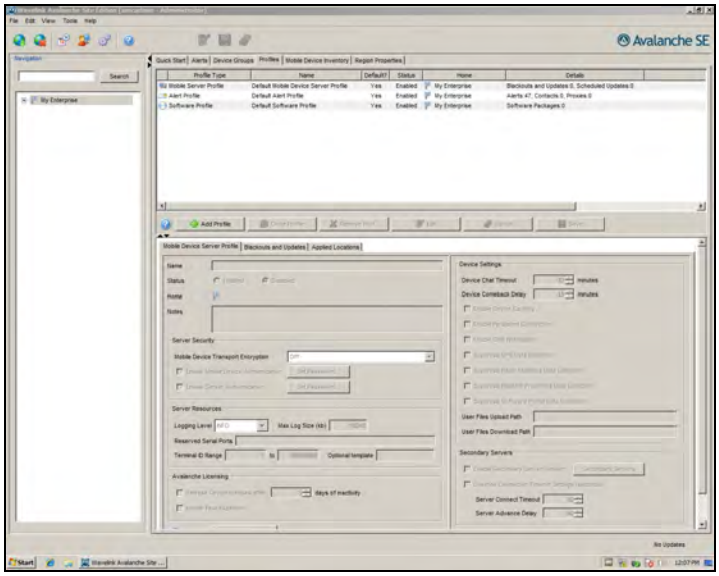
Avalanche Manager: This tool provides centralized client management within a network. The Avalanche Manager consists of two applications: Avalanche Manager Agent and the Avalanche Management Console. The Agent performs the management functions on the LAN or WAN, while the Management Console provides an administrative interface to one or more Manager Agents

Avalanche Enabler: This tool is an agent that runs on each JOYA™ X1 to allow device management via Avalanche Manager.

Avalanche-enabled software packages: These software packages are intended to run on the JOYA™ X1 and include settings and applications. The Avalanche Enabler is embedded in the JOYA™ X1 allowing communicating directly with the Avalanche Manager over a wireless connection. The Enabler and the Avalanche Manager work together to synchronize software on the JOYA™ X1 to an associated profile on the Management Console. The profile can include one or more distinct software packages, as well as RF and TCP/IP configurations, and can apply to multiple devices.

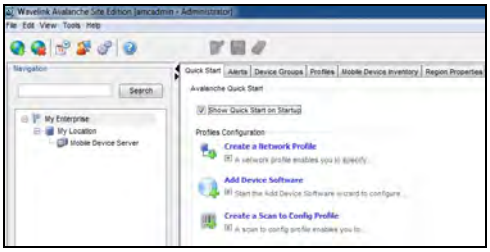
3.4 AVALANCHE MANAGEMENT CONSOLE

The Avalanche Management Console provides an administrative interface to one or more Manager Agents. After installing, click on the Avalanche shortcut on desktop or select *Avalanche SE Console* from *All Programs -> Wavelink Avalanche SE* menu.

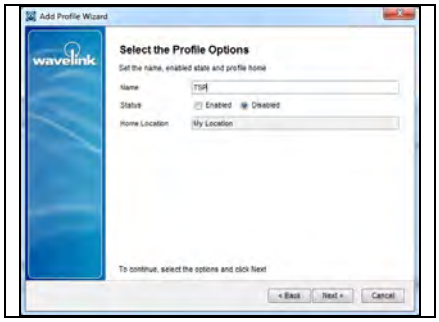


3.4.1 Network profile

Define the way each JOYA™ X1 terminal will connect the network.

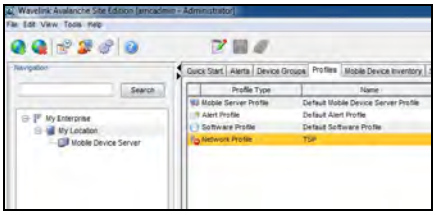


To create a Network Profile select the tab *Quick Star*, click on *Create a Network Profile.*



Insert a suitable profile name, leave status disabled then click *Next*.

Skip the *Profile Selection Criteria* screen then select *Finish* in the *Review Profile Settings* screen. A new line named *Network Profile* will appear on the right part of the main screen



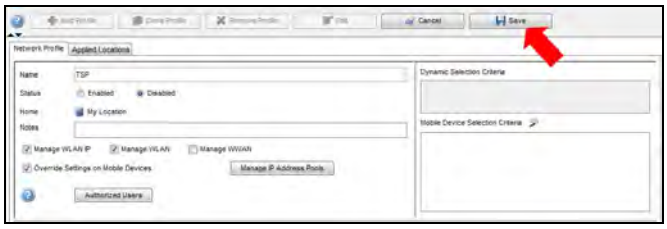
Keep the *Network profile* line previously created highlighted. Click on the Edit button on the top lower part of the main screen. Check the *Manage WLAN IP,* the *Manage WLAN* and the *Override Settings on Mobile Devices boxes.*

On the lower part of the main screen select the *WLAN IP Settings* tab.
Check the box *Manage IP Assignment* and select *DHCP Server* on the side drop-down menu.
Check the box *Server Address* and enter the DHCP server IP address in decimal dotted notation.

Check the box *Subnet Mask* and enter the subnet mask in decimal dotted notation.

On the lower part of the main screen select the *WLAN Settings* tab.
Check the box *SSID* and enter the wifi SSID key.
In the *Encryption Settings* area enter the suitable values for the wifi communication (encryption type and key value).

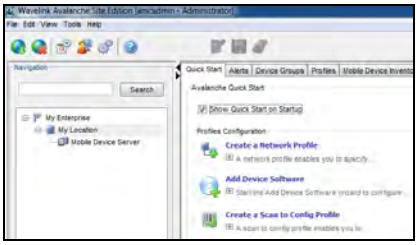
Click on the *Save* button to confirm modifications.



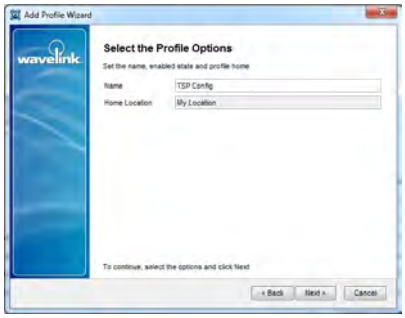
3.4.2 ScanToConfig Profile

Avalanche allows creating ScanToConfig profiles (setup by scanning barcodes) that are configured with network settings. User can then print the profiles as barcodes and a JOYA™ X1 can scan these barcodes. The information from the scanned barcodes is used to configure the network settings on the JOYA™ X1

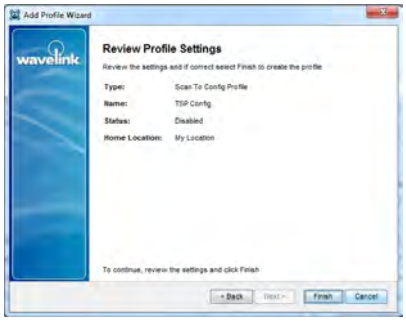
such as the IP address, subnet mask, and gateway as well as wireless parameters such as SSID, encryption rules and keys etc... The length of the barcode is configurable.



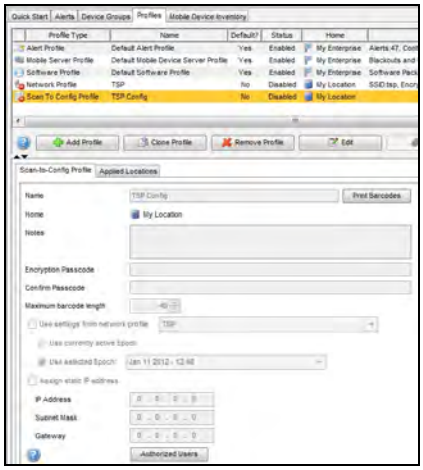
To create a Network Profile select the tab *Quick Star*, click on *Create a Scan to Config Profile.*



Enter a suitable Network Profile name then click *Next*

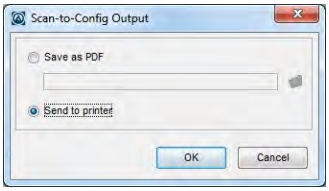


Verify and confirm by clicking on *Finish*. A new line named *Scan To Config Profile* will appear on the right part of the main screen

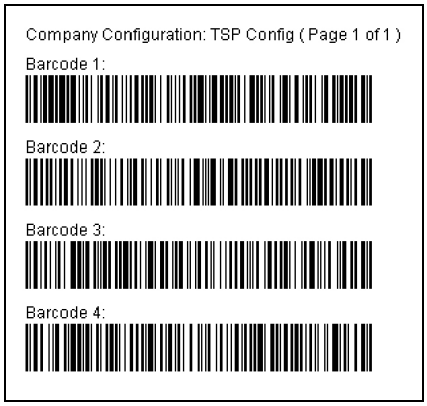


Be sure that the *Scan To Config Profile* line is highlighted then press the *Edit* key. Check the box *Use settings from network profile* and verify the network profile name selected in the right windows. Confirm by clicking the *Save* key.

Select the *Scan To Config Profile* line then press the *Print Barcodes* key.

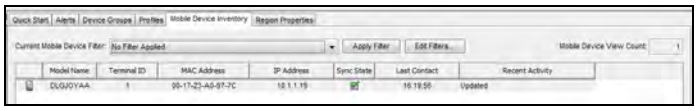


Select *Save as PDF* then click on the folder icon and enter a suitable name and path for the output file. Then a PDF file will be created.



Make a paper copy and use it for JOYA™ X1 configuration.

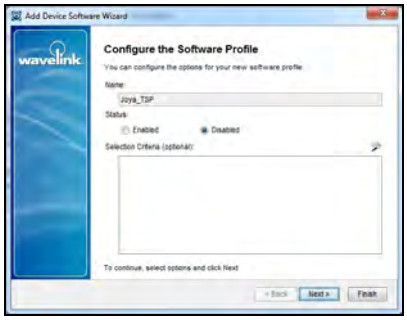
When the device is properly configured and connected to the Avalanche server it will be reported in the *Mobile Device Inventory* tab.



3.4.3 Software profile

Software profiles allow user to organize and configure software for deployment to JOYA™ X1 terminal, as well as change device parameters. Add software packages to the profile, configure them, and schedule how and when they will be installed. When the profile is enabled and applied to a location, the software packages associated with the profile are installed on JOYA™ X1 terminals meeting the selection criteria for the profile and packages.

To create new software profile, from the *Quick Start* tab select *Add Device Software*.

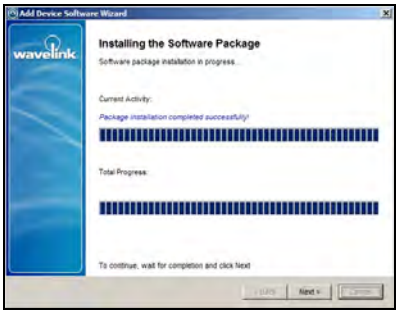


Insert a suitable software profile name, leave status disabled then click *Next*.

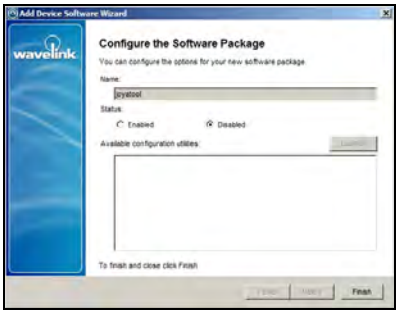
You can add packages, copy packages that have already been added to a different profile, or create custom software packages from the Avalanche Console. Before you create a custom package, ensure you know the location of all the files you want to include and ensure that the files are valid.

In the example select a previously created Software Package (AVA extension) then Next.

Check the license agreement and confirm with *Next.*



Wait for installation then click *Next.*



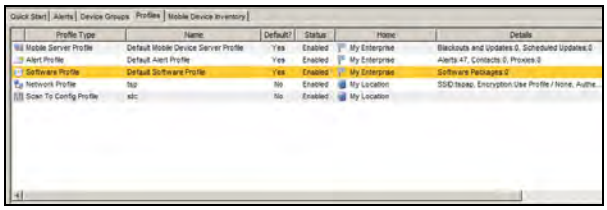
Close this wizard with *Finish.*

Once you create a software profile, you must enable/disable and add/remove the software packages to that profile. Through the software profile you can configure the software package settings and then deploy the packages to specific mobile devices.
When working in software profiles, you do not need to be in Edit Mode to add or configure software packages. Software package configuration changes are saved to the actual package. However, you must enter Edit Mode to configure any other software package options.

3.4.4 DLdcu package

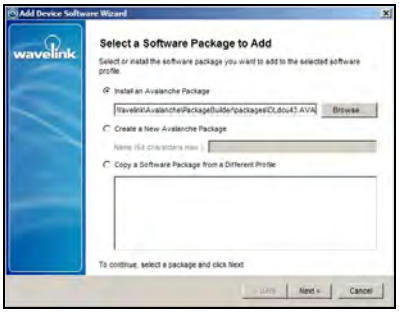
The Datalogic Configuration Utility for Avalanche is a preassembled Avalanche package (AVA extension) specifically created and freely distributed, aimed to deploy configuration parameters on different mobile devices manufactured by Datalogic through the Avalanche platform. Usually this package is assigned to the default profile.

In order to install the DLdcu Avalanche Package you first must install the DCU program in the PC.



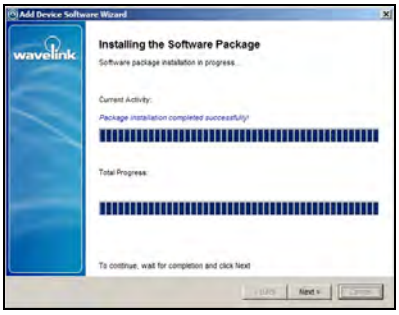
From the Profiles tab select *Software profile/Default Software Profile*.

On the lower part of the screen click on *Install Package*

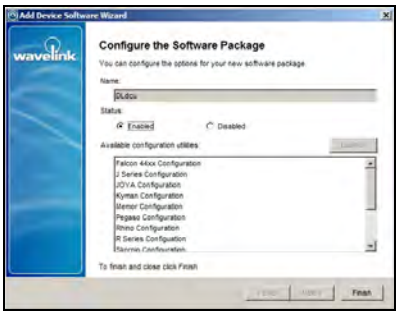


Check *Install an Avalanche package*. Browse and select the *DLdcuxx.AVA* file

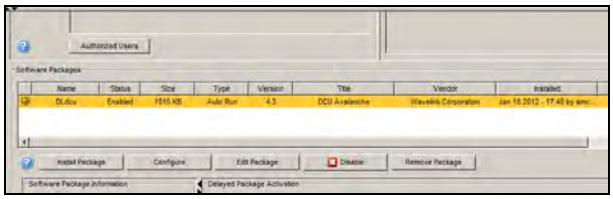
Acknowledge the license request



Wait for the installation end.



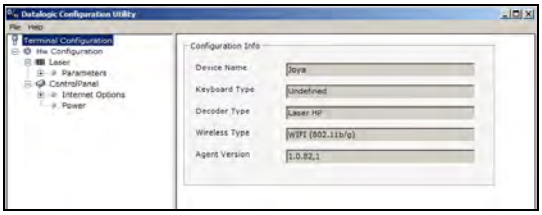
Select Finish.



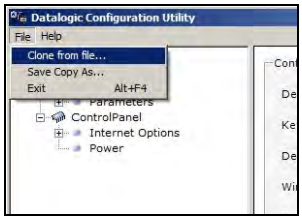
Select the DLdcu package

Cliick on *Configure*

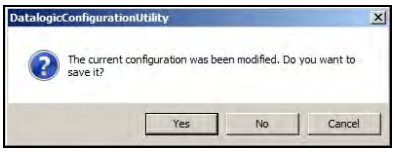
Select *JOYA Configuration* then click on the *Launch* button



DLdcu application will start.



From the *File* menu select *Clone from file*, browse up to the previously created JOYAa.cfg file (see Datalogic Configuration Utility chapter). Close the application.



Confirm the pop-up request by clicking on the *Yes* button.

This procedure is required to create a JOYA™ X1 profile in the DLdcu.AVA package. The existing JOYA profile refers to an incompatible device.

3.5 AVALANCHE PACKAGE BUILDER

3.5.1.1 Wavelink software package

A software package is a collection of application files that reside on a mobile device. This includes any support utilities used to configure or manage the application from the Avalanche Console. A software package includes the following components

- **Primary application files**. These files include application, configuration, and support software intended to run on a JOYA™ X1 device.
- **Plug-in management tools**. These include configuration utilities that allow Management Console operators to easily configure and manage the software package.
- **Package control file**. This file contains a master description of the package, including the package title, revision code, “selection criteria” that determines which device types can receive the package, and other information. The selection criteria can encompass many mobile device characteristics, not only JOYA™ X1 including mobile device models, physical characteristics, IP and/or MAC addresses, etc.

Additionally, Version 3 packages may contain the following components:

- **Retrievable Files**. These are files you want to retrieve from the JOYA™ X1 and copy to the Avalanche Agent. Retrievable files are supported in the 3x Enabler.
- **Post Install File**. This feature allows you to create script files using the Package Builder.
- **Uninstall Command**. This is an executable that may be added to perform specific uninstall instructions, such as the removal of registry settings.
- **Custom EULA**. This feature allows you to include a customer user license agreement that must be made available as an HTML-formatted License.text file.

Software packages are divided into the following categories:

- **Control**. An internally used package specific to the Avalanche Console. A network profile is an example of a control package.
- **Application**. These packages install an application which can be run from the Application Menu screen on the mobile device. An example of an application package is the Telnet Client.
- **Support**. These packages deliver files and do not add new items to the Application Menu screen on the mobile device. An example of a support package is a package that updates an existing file.

- **Auto Run**. These packages automatically run after download but do not appear in the mobile device's application list. An Enabler Update Kit is an example of an auto run package

The Avalanche Package Builder is a specific tool that simplifies the package creation process. This utility performs several functions:

- It gives a visual method for creating and editing software packages. It simplifies the configuration of the package through a GUI-based interface.
- It creates a file structure to contain all application files, support files, and plugin configuration files that are required to run and maintain the application.
- GUI interface provides a window into the software package structure, showing attributes that can be set for each package element.
- It automatically generates the package control file.
- It places all package files into default or configured locations in the file structure.
- Once the software is packaged, it can easily be transferred or distributed.

Deep description of this tool is beyond the scope of this document; please refer to the documentation freely available in the Wavelink website.

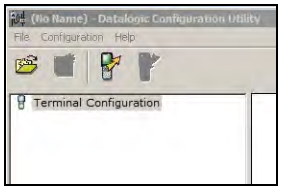
3.6 DATALOGIC CONFIGURATION UTILITY

The Datalogic Configuration (DLdcu) is software running on PC that allows managing the JOYA™ X1 parameters by using the ActiveSync or Windows Mobile Device Center Connection and a physical USB link.
Full description of this tool is beyond the scope of this document; a detailed help is embedded in the program. Nevertheless a specific usage description, involving the Avalanche application, will follow; since it's not documented elsewhere.

In order to use the DLdcu, your computer must have the Microsoft Active Sync or Windows Mobile Device Center installed.

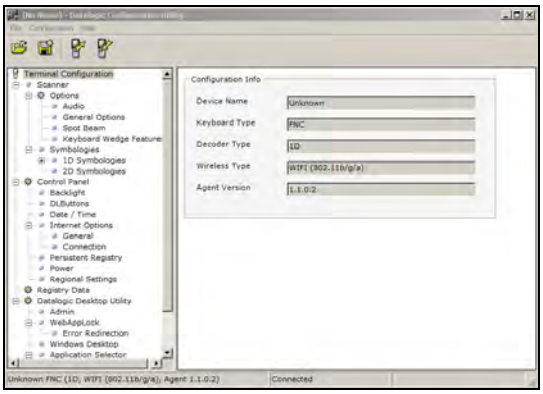
3.6.1 Create JOYA™ X1 configuration profile

Install the DLdcu software package following the instruction provided by the DLdcu manual. Connect the JOYA™ X1 to the computer using the MicroUSB-USB cable, wait for the ActiveSync connection then start the DLdcu application.



The solid terminal icon indicates that the terminal is connected.

Click on the icon to get the configuration from device.



Once configuration is loaded it can be edited then reloaded to the device and/or saved.

Select *Save as* from the *File* menu, enter *JOYA* as filename; program will add automatically the CFG extension.

Use this file to modify the DLdcu.AVA package as stated above.

3.6.2 Using the Stylus (available only on JOYA™ X1 Plus)

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

Double Tap:	Touch the screen twice with the stylus to open items and select options.
Drag:	Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
Tap-and-hold:	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 Stylus Calibration paragraph.

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 ADC-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.

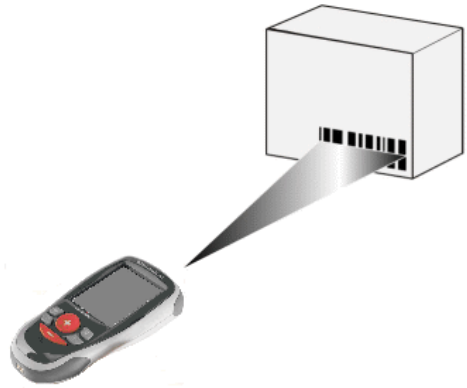
3.7 DATA CAPTURE

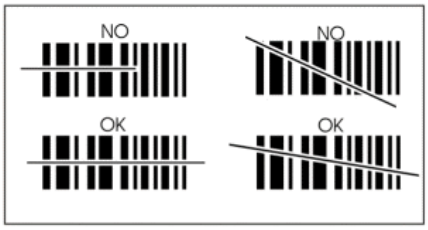
To capture data first of all select the Decoding icon on the Control Panel and open the applet.

To configure and enable data capture parameters refer to par. 3.10.

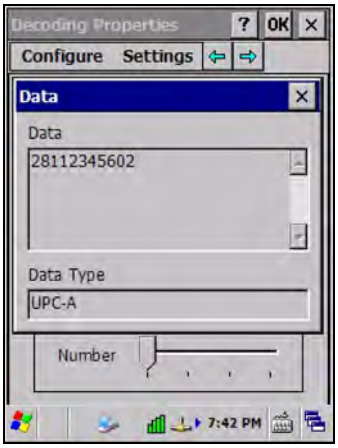
3.7.1 Barcode Data Capture

To scan barcodes, point the Datalogic JOYA™ X1 scanner model onto the code from a distance within the reading range while pressing the "**Up**" key.
The lighted band emitted by the reader 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.





Pop-up windows will report the data and the symbology of the scanned barcode (see: Configure/Decoding Options paragraph).



3.8 DESCRIPTION OF THE KEYS

The Datalogic JOYA™ X1 provides a 6-key keyboard. The following image shows this keyboard.

Main Keys Function

Key " + ": it corresponds to ArrowUp Key.

Key " - ": it corresponds to ArrowDown Key.

Key " Left ": it corresponds to F1 (Function1) Key.

Key " Right ": it corresponds to F2 (Function2) Key.

Key " = ": it corresponds to ESC Key.

Key " e " : it corresponds to ENTER Key.

3.8.1 Resetting the JOYA™ X1

There are three reset methods for the JOYA™ X1
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” restore the JOYA™ X1 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 these keys simultaneously for 5 seconds:

“ + ” & “ - ”

COLD BOOT
A cold boot is a complete reset of the JOYA™ X1 in which all applications are forcibly closed and RAM is completely cleared. Registry is restored from persistent memory if a saved copy is available (see 3.11.1) and RAM file system completely erased. You will lose any applications and data (registry too) 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, lightly press with a metallic clip inside the circle hole on the back.

CLEAN BOOT
A clean boot is a complete restore to factory default and backup folder content erase of the JOYA™ X1. You will loose any applications and data (registry too).
To perform a clean boot first execute a cold boor while keeping pressed the keys:

“ = ” & “ - ”

A pop-up will ask you to confirm, do it by pressing:

“ e ”

An acknowledge pop-up and reboot will follow.

	Warm Boot	Cold Boot	Clean Boot
REGISTRY	Preserved	Restored from the latest persistent copy (from flash)	Reinitialized
Flash Disk (Backup Folder)	Preserved	Preserved	Cleared
Object Store (RAM Disk)	Preserved	Reinitialized, some persistent files could be restored (from flash)	Reinitialized
Storage Card (IF PRESENT)	Preserved	Preserved	Preserved

CAUTION

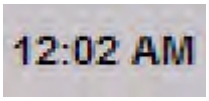
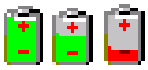
Before performing a reset, it is recommended to:

- *Execute a system backup to keep your more important files and applications persistent.*
- *Save the registry to non-volatile memory to guarantee the persistence of the Windows configuration..*

3.9 STATUS INDICATORS

3.9.1 Taskbar

The Taskbar provides information about the time, the battery level, the keyboard function, and the decoding status.

ICONS	DESCRIPTION
Time and Battery Icons	
	It displays the time.
	They are representative of 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%.
	It indicates that the battery is charging.
Radio Status Icons	
	It indicates if the radio is connected or not with an Access Point.
Network Status Icons	
	It indicates that the terminal is connected or not connected to the server

3.10 DATA CAPTURE CONFIGURATION

Decoding can be accessed from the Control Panel.

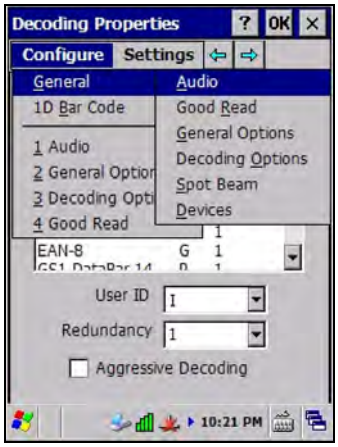
There are two sections in the Decoding control panel, each containing additional pages. There are six General Configuration pages and multiple Barcode symbology pages.

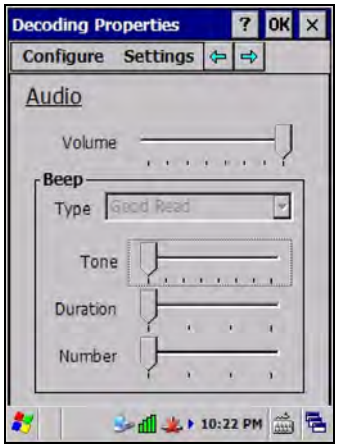
3.10.1 Configure

Select the desired configuration from the options shown in the figure below, and the other Decoding Properties figures on the following pages.
Select General or 1D Bar Code, then use the menu or tap the left and right arrow keys to navigate the different pages of the Decoding utility. The menu options will change to reflect the items most recently selected.

AUDIO

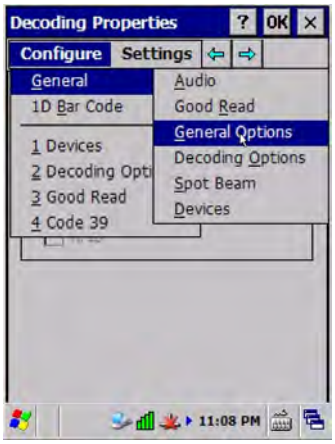
From the Decoding menu, tap Configure > General > Audio. Use to set volume, tone, duration, and number of various types of beeps.

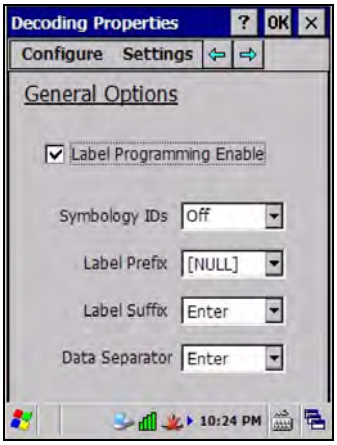




GENERAL OPTIONS

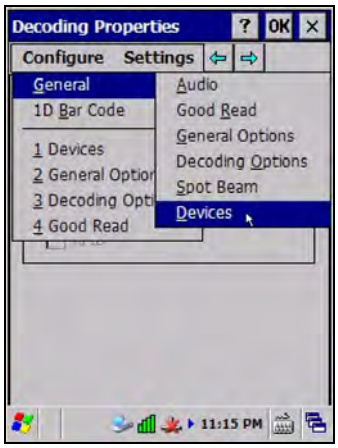
From the Decoding menu, tap Configure > General > General Options. Select from Label Programming Enable, Symbology IDs, Label Prefix, Label Suffix, and Data Separator.

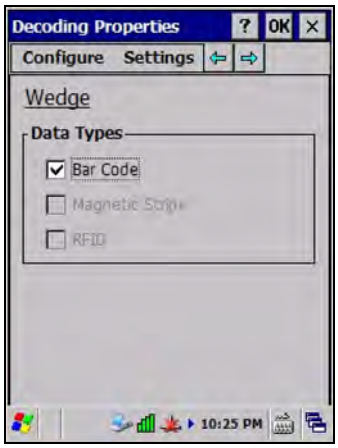




DEVICES

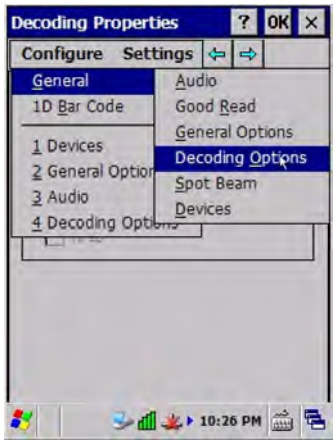
From the Decoding menu, tap Configure > General > Devices. Use to enable or disable the keyboard wedge for Barcode reader.

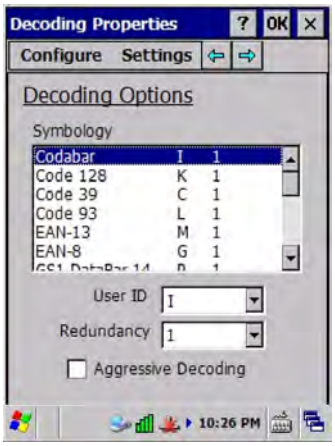




DECODING OPTIONS

From the Decoding menu, tap Configure > General > Decoding Options. Select a symbology to view or change the available properties settings.

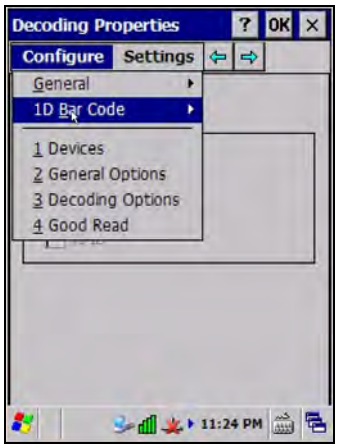


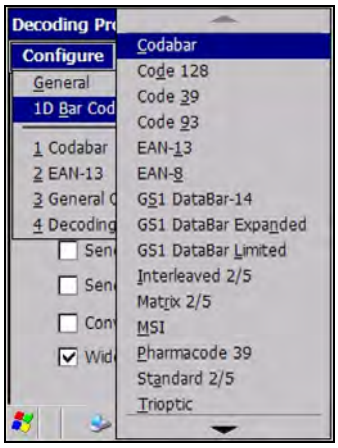


Select Configure > General from the menu to view other configuration options.

1D BARCODE SYMBOLOGY PAGES

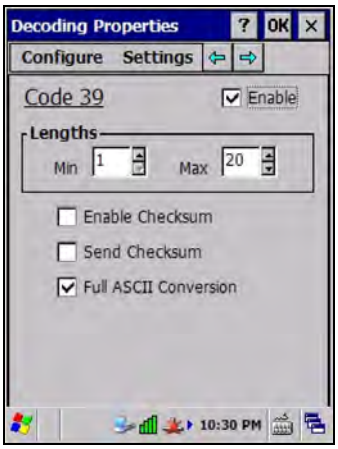
Use the drop-down menus from Configure > 1D Barcode, or tap the left and right arrow keys to navigate the different pages of the barcode symbology pages.





Select Configure > General from the menu to view other configuration options.

Each barcode symbology opens to its own page, as shown in the figure below. Refer to the sample symbology control panels for examples of the types of fields and options you can modify.

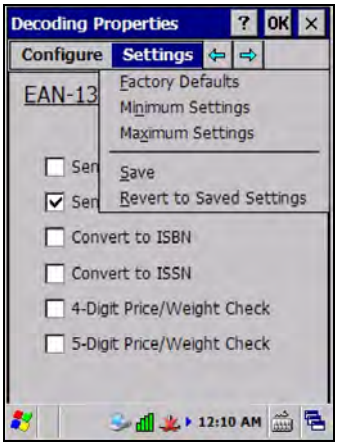


Example: Code 39: Enable, Min/Max Lengths = 1/20, not Enable Checksum, not Send Checksum, Full ASCII Conversion.

DECODING SETTINGS

Select from the Decoding Properties Settings menu to restore previous configurations and/or other available default settings. Choose from:

- Factory Defaults
- Minimum Settings
- Maximum Settings
- Save (New Settings)
- Revert to Saved Settings



The settings are saved when you tap OK.

3.11 CONTROL PANEL

From the Desktop, double tap on the "My Device" icon and then double tap on the "Control Panel" icon to open the 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.

3.11.1 Registry

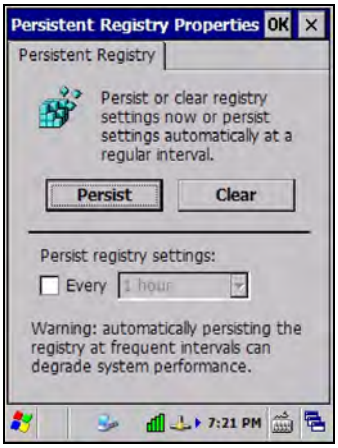
The PERSISTENT REGISTRY applet provides management of Windows CE 6.0 registry.

Select the PERSISTENT REGISTRY applet by double tapping the Persistent Registry icon.

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

- PERSIST allows permanently saving the Windows configuration (example: custom configuration of screen desktop background color, or network adapter configuration) to non-volatile memory.
- CLEAR allows restoring the initial factory default configuration. 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 and in case of a Cold Boot.



Persistent Registry Window

3.11.2 Using Summit Radio Card Utility

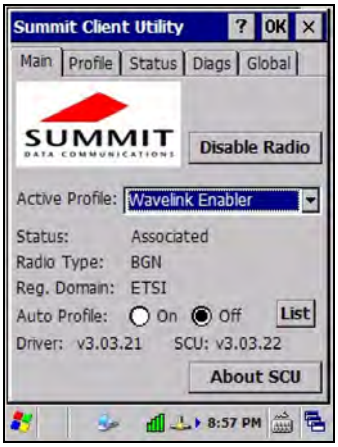
The JOYA Summit WiFi card provides a useful client utility suitable for radio configuration and site survey purposes.

3.11.3 Summit Radio Card : Starting client

The client can be started from the Windows CE desktop by clicking the related icon on the tool bar at the bottom, or selecting the Summit Client Utility icon on the desktop:

3.11.4 Summit Radio Card : Main screen

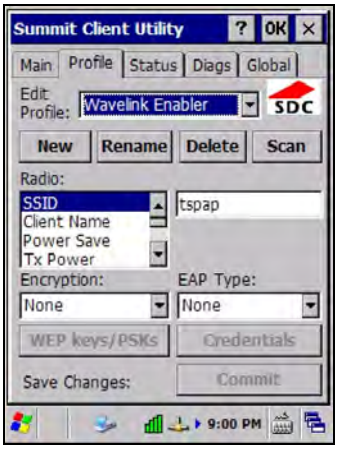
The following picture shows the screen when Summit Client is started



The *Active Profile* window displays the current profile and lets user to change it.
The *Disable Radio* button turns off the radio card; after deactivation the same button changes to *Enable Radio* so the radio can be reactivated.
To close the application, press the close button at upper-right corner of window.

3.11.5 Summit Radio Card : Profile screen

Radio card is managed through radio profiles.



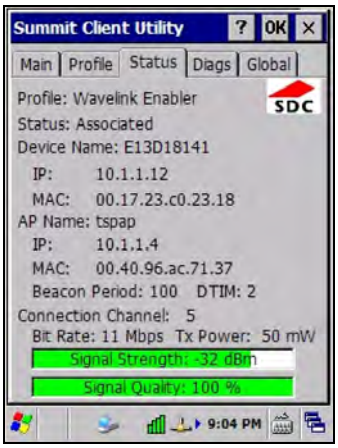
User can rename, delete, create and save any changes by the *Rename*, *Delete*, *New* and *Commit* buttons.
The name chosen for the profile is also his identifier. Profile is defined by a set of parameter that user can customize. The following is a simple profile for testing.

Field	Value
SSID	tsunami
Client Name	E13D18141 (the JOYA™ X1 S/N)
Power Save	Fast
Tx Power	Maximum
Bit Rate	Auto
Radio Mode	BG rates full
Auth Type	Open
EAP Type	None
Encryption	None

Once a new profile is created, remember to enable it from the Main windows.

3.11.6 Summit Radio Card : Status screen

This screen shows the radio status related to the profile currently used.



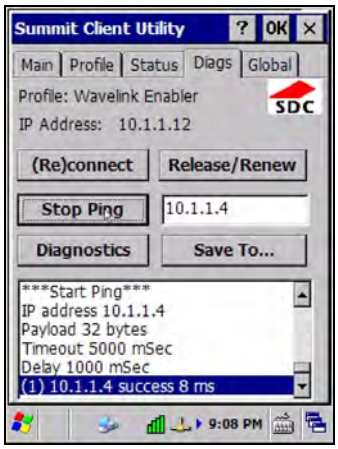
User can read current profile name, client device name, IP address and MAC address. The Access Point to which the terminal is currently associated t is specified by name, IP address and MAC address.
User can also read the signal strength (dBm), the transmission power (mW), the WiFi channel, the rate (Mbps) and the signal quality.

3.11.7 Summit Radio Card : Diagnostic screen

This screen allows user to interact with radio card to perform simple and useful functionalities.

The *(Re)connect* button disables and re-connects radio card.
The *Release/Renew* button releases and renews the radio interface IP address.

In order to test the radio link, user can ping the associated access point by pressing the *Start Ping* button.
The ping output is displayed on the large text windows



The *Diagnostic* button displays the radio configuration and dumps available profiles

Site Survey functionality is not available.

3.11.8 Summit Radio Card : Global Settings screen

There are many other parameters used to configure the radio card and they do not depend on used profile, nevertheless for good working it's recommended do not change the default values.

3.12 STYLUS CALIBRATION (ONLY ON JOYA™ X1 PLUS)

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, complete the following steps:

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

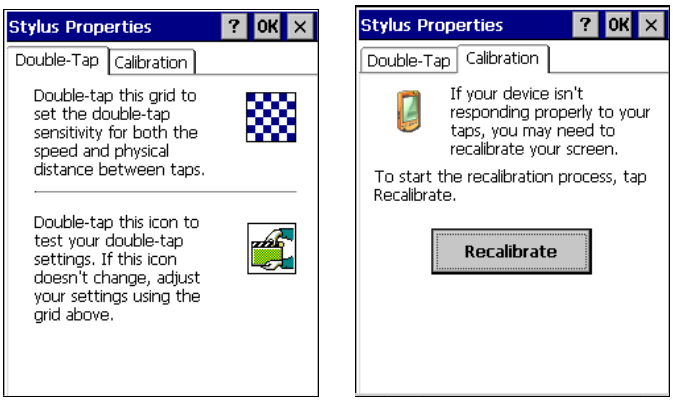


Figure 1

4. Tap **Recalibrate** to open the **Calibration** screen shown in Figure 2.
5. Carefully press and briefly hold stylus on the centre 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.

3.13 WINDOWS CONNECTIONS

To connect the Datalogic JOYA™ X1 to another device (i.e. Host PC) from Windows, several programs are available.

3.13.1 Microsoft® ActiveSync®

Microsoft® ActiveSync® gives you the possibility to connect your desktop computer to your Datalogic JOYA™ X1 and move files and folders back and forth.

With ActiveSync®, it is possible to:
- Back up and restore Datalogic JOYA™ X1 data.
- Copy files between Datalogic JOYA™ X1 and desktop computer.

You can establish an ActiveSync® connection to your Datalogic JOYA™ X1 through the USB interface.

NOTE	*Visit the following Microsoft Web site for the latest in updates and technical information:* *http://msdn.microsoft.com/en-us/library/ee484709.aspx*

3.13.2 Microsoft® Windows Mobile Device Center®

Microsoft® Windows Mobile Device Center® works as ActiveSync. It is available in the Microsoft® Windows Vista® and Windows 7® operating system.

NOTE	*Visit the following Microsoft Web site for the latest in updates and technical information:* *http://technet.microsoft.com/en-us/library/cc722321(WS.10).aspx*

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. 0.*

3.13.3 FTP Server Setup

The Datalogic JOYA™ X1 Operating System includes a 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 JOYA™ X1 using its FTP Server through the WLAN using the WiFi radio

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 JOYA™ X1 using ActiveSync®.
3. Launch the .reg file from the Datalogic JOYA™ X1
4. Perform a warm boot on the Datalogic JOYA™ X1
5. From the PC > Explorer address bar (or running an FTP Client from the PC), enter the Datalogic JOYA™ X1 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.

3.14 BACKUP DIRECTORY FILE MANAGEMENT

All of the Windows CE 6.0 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 reboot, 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 6.0 will copy the contents including all sub-directories of \Backup\Windows to \Windows. Likewise, to maintain files that must be run at Windows CE 6.0 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 applications programs will be run after any type of re-boot (both software and cold boot). However, since file system persistence is performed after the "\BACKUP\Startup" folder execution, for those programs which depends upon the DLLs and resources copied from "\BACKUP\Windows" to "\Windows" during the cold-boot, the "\BACKUP\Windows\dl_startup" folder is to be preferred to execute programs and applications, since the execution follows the file system restore (and no DLL and resource dependence failure will occur). 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. Reinstall?". This message blocks the boot process. Press the [Enter] key to continue the system initialization. In the JOYA™ X1 Plus, a 4GB DS type card is available as permanent general purposes storage device (path = \Storage Card).

3.15 FIRMWARE UPDATE

The Datalogic JOYA™ X1 is equipped with a tool that implements a firmware update service.
This tool, called **Datalogic Updater** (**DLUpdater**), is compatible with all hardware versions of the Datalogic WindowsCE 6.0 models:

An update can be explicitly invoked by running the application **DLUpdater.exe**, provided together with the update file **DLUpdate.zip**. The update must be contained in the root.

CAUTION	*It is advisable, even if not binding, to connect the terminal to an external power source before starting the update process. This prevents the terminal from turning off while running and avoids a corruption of flash content.*

CAUTION	*After the update process, all the data stored in the backup folder could be irreparably lost, as well as the device configuration (even that one stored in persistent memory). Therefore, before starting a firmware update it is advisable to run a backup copy of the data you want to preserve on PC (e.g. using ActiveSync or Windows Mobile Device Center Connection).*

3.15.1 Retrieving a Firmware Image Update

The following instructions use Internet Explorer to retrieve the most current firmware image.

1. Launch Internet Explorer on your PC and navigate to http://www.adc.datalogic.com..
2. Navigate the Downloads section of the web site.
3. Select the product, desired language, and software updates. Click Go!
4. Select the file you want to download, then click Save and navigate to the location where you want to save the firmware files.
5. Click Save again to begin copying the files to your local machine (or local network location).

3.15.2 Firmware Update Procedure

1. Download the update from the web site (see previous par.). It is a zip file containing the files:
   - DLUpdater.exe – that starts the update;
   - DLUpdate.zip – archive file containing the updated firmware;

2. Copy the files DLUpdater.exe and DLUpdate.zip in the root.

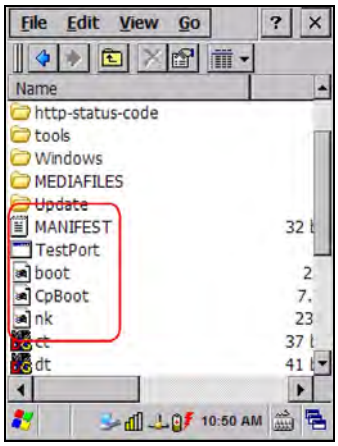
3. Open the root on the terminal and run DLUpdater.exe by double tap the icon (JOYA™ X1 Plus) or by ActiveSync/Mobile Companion (JOYA™ X1 Basic).

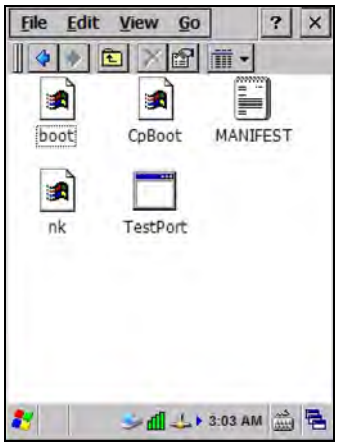
4. The DLUpdater starts decompressing files in the memory card (JOYA™ X1 Plus) or in the \Backup folder (JOYA™ X1 Basic).

CAUTION

There are no feedback messages on the screen while the DLUpdater operates, just wait for the terminal to reboot.

5. DLUpdater performs all the necessary operations of check, update and verify and, if no errors occur during the update, terminates the running invoking a cold boot of the terminal, so that the update process could be completed
6. At the end of the process, the updated files will remain where decompressed. They must be manually removed.





4 MAINTENANCE

NOTE	*Battery packs are not initially charged. Therefore the initial 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.

The battery icon on the Taskbar indicates when the battery pack is low.

It is also possible to recharge the battery pack by using a JOYA Cradle.

Moreover recharging is possible by USB Direct connection with the host computer, but with longer charging times and in this case it is advised to keep the mobile computer off.

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	*The maximum time required to recharge a completely run-down standard battery pack is about 12 hours by using the USB and 7 hours by using the cradle.*

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 ºC (68 to 86 ºF).* *JOYA™ X1 should be charged at an ambient temperature between 0 - 35º C to achieve the maximum charging rate. Never charge the main device or spare batteries in a closed space where excessive heat can build up.*

4.2 REPLACING THE BATTERY PACK

To correctly replace the battery pack, proceed as follows.

1. Unscrew the two screws placed on the back bottom. The battery pack cover is now released.

2. Remove the cover and then the battery pack, using the proper plastic strips. Pay attention when disconnecting the connector.

3. Install the new battery pack, first insert the connector respecting the right way, then the upper side, finally the bottom side, leaving the plastic strip available for future replace.

4. For correct locking, first insert the upper part of the battery cover, then the lower and screw the two screws placed on the back bottom.

WARNING

To install, charge and/or do any other action on the battery, follow 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 ADC 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.

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.

WARNING

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, 2011/65/EC, 2012/19/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 JOYA™ X1 does not turn on. In this case, either substitute the battery pack with a charged one (sufficiently charged) or insert Datalogic JOYA™ X1 into a powered cradle or plug into the USB PC port.

NOTE

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

4.3 CLEANING THE MOBILE COMPUTER

Periodically clean the Datalogic JOYA™ X1 with a slightly dampened cloth.

5 JOYA CRADLE DISPENSER

5.1 INTRODUCTION

JOYA Cradle Dispenser has the following responsibilities:

- to recognize the insertion and extraction of the JOYA™ X1
- to control the blocking device
- to signal status using the LEDs
- to supply power to the JOYA™ X1 for battery recharging

JOYA Cradle Dispenser has three JOYA™ X1 slots, each equipped with its own control unit, an electromechanical system for blocking/releasing the terminal, notification light, battery power and recharging circuits.
Its special structure makes it possible to design any type of dispenser (wall-mounted or island) easily, allowing twice the number of terminals to be installed per vertical square meter with respect to the competing systems.

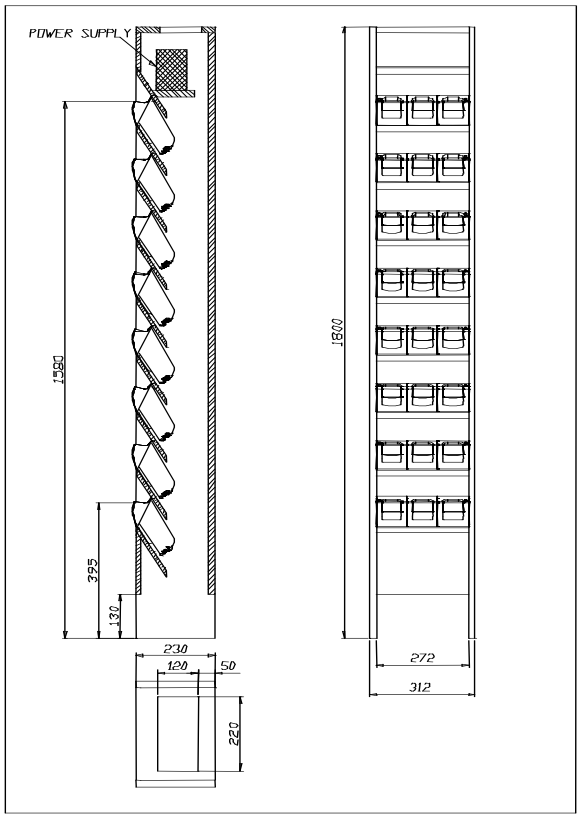
5.2 ACCESSORIES

- 91ACC1000 Power Supply 12V 300W
- 91ACC0730 Power Junction Cable I90x/3 Cradle (8 pcs.)
- 91ACC0650 Term. Unlock Magnets (5 pcs.)

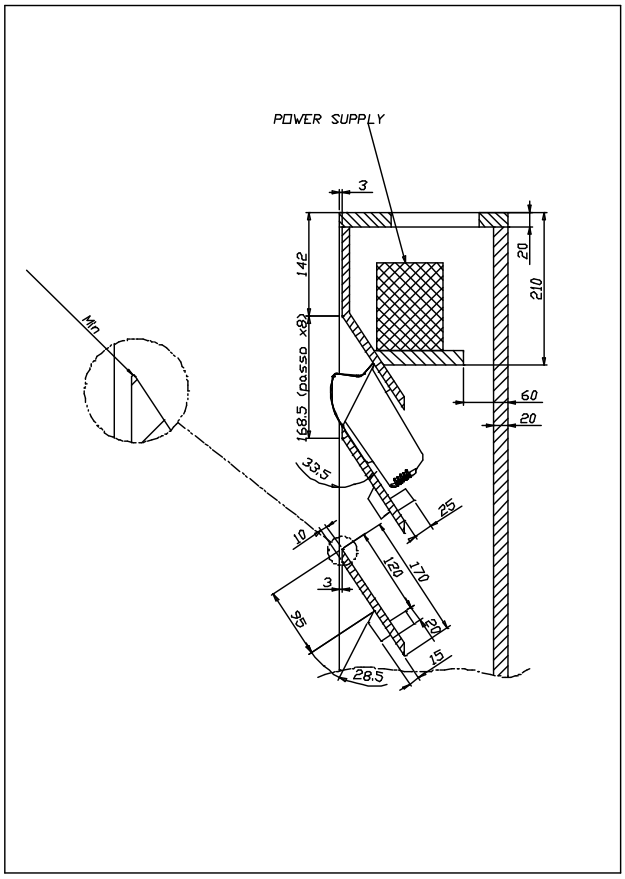
5.3 INSTALLATION REQUIREMENTS

The figure below represents an 8 JOYA™ X1 Cradle Dispenser Base Unit organized in a single column.

JOYA™ X1 will be inserted into the JOYA Cradle Dispensers are at a minimum height of approximately 40 cm. from the floor and a maximum height of about 160 cm. from the floor.



5.3.1 Base Unit Construction Details

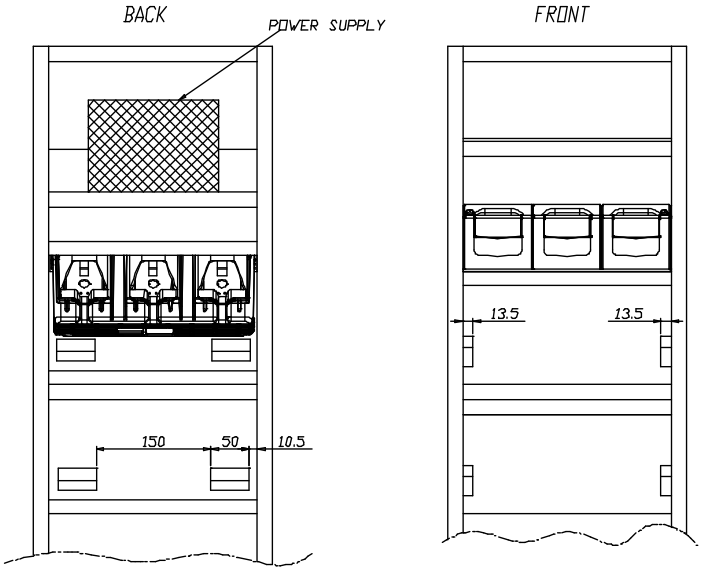


All of the dimensional quotes necessary for building and correctly mounting the supporting crosspieces and fixing blocks for the JOYA Cradle Dispensers are indicated.

The zoom of the upper edge of the supporting crosspiece indicates the necessity of reducing the radius of this edge as much as possible in order to provide a stable contact surface for the upper cover of the JOYA Cradle Dispenser.

The power supply shelf is positioned so that it guarantees a sufficient volume of air flow for the cooling of the power supplies.

Suggestion:
The cradle fixing blocks shown in the figures are mounted to the supporting crosspieces under the JOYA Cradle Dispensers. Their purpose is to prevent the Cradle Dispensers from falling inside the cabinet during the mounting phase in which the JOYA Cradle Dispensers may not be correctly positioned before fixing them.



5.3.2 JOYA Cradle Dispenser Supports

JOYA Cradle Dispensers are supported inside the Base Unit from crosspieces fixed to the side panels of the cabinet. The front part of each JOYA Cradle Dispenser cover rests on the upper edge of its supporting crosspiece, while the back part rests on two fixing blocks attached to the crosspiece above it.

JOYA Cradle Dispenser is mounted to the cabinet using two screws that are inserted into the holes provided towards the back of its cover and screwed into the corresponding holes in the fixing blocks.

To correctly position JOYA Cradle Dispensers, the supporting crosspieces and the fixing blocks must be mounted according to the dimensional quotes and the angles.

5.3.3 Internal Cabinet Space and Openings

The space between the rear of the JOYA Cradle Dispensers and the back part of the cabinet must be left for two reasons:

- it must be possible to retrieve objects that accidentally fall through the cradles from the floor behind the cabinet.
- there must be a zone for air to freely circulate behind the JOYA Cradle Dispensers to aid their cooling during operation.

For these reasons the cabinet must not be closed at the bottom and must have an opening at the top. To allow retrieval of objects that could accidentally fall into the cabinet, it is necessary to leave space between the lower edge of the lowest crosspiece and the floor. This space must be a compromise between the necessity of allowing object retrieval and the necessity of prohibiting access behind the cabinet.

5.3.4 Anchoring and Maintenance Issues

The cabinet must be anchored to the wall in at least two points, since the contact surface area on the floor is small and therefore not sufficient to guarantee full stability.

Suggestion:
It is preferable for the cabinet to have a removable back panel for easy access inside when performing cabling.

The top of the cabinet should also be removable for access to the power supplies during maintenance without the necessity of removing the cabinet from the anchoring points to the wall. For this reason the power supplies should also be able to be mounted and removed from the top of the cabinet.

5.3.5 Power Supply Positioning and Cooling

At the top of the cabinet there must be an opening not small. This opening generates a natural convection effect allowing the flow of air to remove heat generated by the JOYA Cradle Dispensers during their operation.

The power supplies or single power supply must be mounted on their shelf in the upper part of the cabinet.

This position for the power supplies has been chosen to aid the flow of air inside the cabinet taking advantage of natural convection. The hot air generated by the power supplies, in fact, leaves through the opening at the top and takes in cooler air from the lower part of the cabinet.

The power supplies therefore must be placed on the shelf in such a way as not to block the flow of air coming up from the lower part of the cabinet.

The opening at the top of the cabinet must be covered with a grill or mesh, which allows air to flow freely but protects against access to the inside of the cabinet. In this way the power supplies can not be reached externally.

Power Supplies

- Single 300 W power supply capable of supplying all 8 Cradle Dispensers (91ACC1000 Power Supply 12V 300W).

The power supplies must be mounted inside the cabinet onto their shelves so that the necessary air flow for cooling the JOYA Cradle Dispensers below is not limited. In addition, the openings on the power supplies must not be obstructed at any time, which could impede correct cooling.

If the power supplies are mounted using angular brackets, use the threaded holes provided on the power supply case. Make sure that the mounting screws are size M4 and do not penetrate the power supply case by more than 5.5 mm.

5.3.6 AC Power Cabling

Connection of the Power Supply to the AC line must be made using a cable having characteristics that meet the Safety Normatives currently in force.

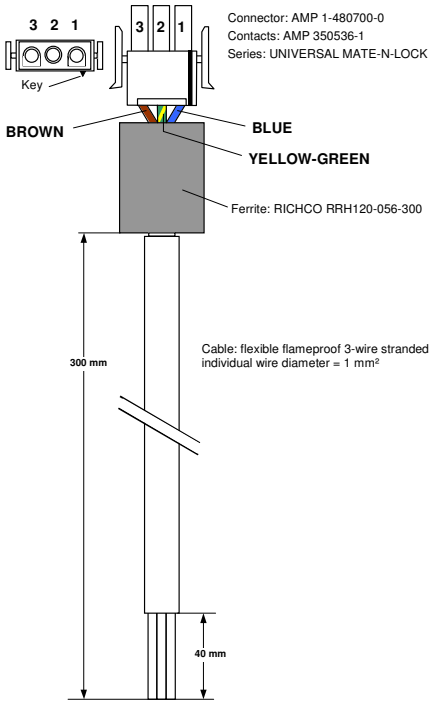
The cable must have an earth ground wire that is connected to the earth ground terminal of the power supply.

The cable must have wire dimensions that meet or exceed the nominal current and power specifications of the power supply to which it is connected.

There must be a cable clamp applied to the power cable where it enters the cabinet, which meets the Safety Normatives currently in force.

5.3.7 Wiring

To wire the JOYA Cradle Dispensers, pre-wired power junction cables are provided as accessories (91ACC0730 Power Junction Cable I90x/3 Cradle -8 pcs.), which are ready to be connected to the power connector at the bottom of the JOYA Cradle Dispenser.



To connect the JOYA Cradle Dispensers to the power supplies, the pre-wired junction cables must be connected to three multi-strand copper wires (singly or incorporated in a cable) and these must be connected to the power supply terminals.

These wiring connections must be made with particular care and meet or exceed the nominal current and power specifications; the current flowing through them is 2.5 A per JOYA Cradle Dispenser. The wires must meet the Safety Normatives currently in force.

The following table indicates the maximum current specifications for some wire conductor sections according to the EN 60950 Electrical Safety Normative.

Maximum Current	Wire Section
10 A	1 mm²
16 A	1.5 mm²
25 A	2.5 mm²

Suggestion:
It is advised to use a cable made up of two groups of three-conductor multi-stranded wire with flame retardant insulation (single or together in a cable with flame retardant insulation) having a copper wire section equal to 1.5 mm².

The two groups of three conductors are connected to the output terminals of the power supplies: in the case of two power supplies, one group of wires is connected to one power supply and the other group is connected to the other power supply; in the case of a single power supply, both groups of wires are connected to the same power supply.

Each three conductor cable group must be used to connect four of the JOYA Cradle Dispensers mounted in the Base Unit via their junction cables.

JOYA Cradle Dispenser junction cables can be connected to the three-conductor cable groups using IDC connectors having a maximum current capability not less than 3 A.

5.3.8 Cable to Power Supply Connection

All 12 Vdc power supply connections, both the main power cable and the power junction cables must be made according to the following requirements:

Power Junction Cable Wires	Connection	Designation
Brown	+12V	+V
Blue	ground	-V
Yellow-Green	earth ground	FG or ⏚

5.3.9 Affixing Cables to Cabinet

The ends of the junction cables that are connected to the main cable groups must be affixed to the cabinet sides so as to guarantee the following conditions:

- it must be possible to extract the JOYA Cradle Dispenser from the front of the cabinet while the cable is connected so that the connector can be plugged in or out of the Cradle Dispenser from outside the cabinet.
- when the JOYA Cradle Dispenser is mounted in the cabinet, its cable must be laid against the supporting crosspiece so that it does not block objects which may accidentally fall through the Cradle Dispenser into the inside of the cabinet.

Next image shows an example of affixing the Cradle Dispenser cables to the cabinet. The Cradle Dispenser cables are connected to the main power cables through IDC connectors.

5.3.10 Safety Precautions

JOYA Cradle Dispenser Cabinet, the relative electrical wiring and connection to the AC power line must be made according to the Safety Normative currently in force.

The following paragraphs contain some particularly important considerations to keep in mind.

- Cradle Dispenser Operating Temperature

  JOYA Cradle Dispensers are designed and built to operate within the following environmental conditions:

Operating Temperature Range:	10 to 30 °C
Storage Temperature Range:	-20 to 60 °C
Humidity:	90% non condensing

- Cabinet

  The cabinet must not have any exposed sharp edges, which could represent a danger to customers.
  The requirements for air passages to cool both the JOYA Cradle Dispensers and the power supplies must be adhered to in order to avoid overheating problems for the components inside the cabinet.

  All components having dangerous voltage levels must be protected from unauthorized access. Only qualified personnel should be authorized access for maintenance purposes.

  In particular, the opening at the top of the cabinet must be closed with a grill or mesh that prevents access from the outside to the power supplies below. In addition, the plastic protection covers must be mounted over the power supply terminals to avoid accidental contact by maintenance personnel when the cabinet is open.

- Wiring

  The wires used for cabling must have flame retardant insulation.

  The cables must be affixed to the cabinet avoiding types of cable clamps that use screws or have moving parts that press directly upon the cable itself. Cable clamps must also be applied close to the wires coming from the power supplies so that they won't be accidentally pulled out of the power supply terminals to which they are connected.

  Avoid running cables with sharp bends or that rest on sharp edges which can damage them over time and in the long run pose a danger inside the cabinet.

  After making all the wiring connections, if some connections have wire exposed without insulation, they must be insulated.

5.3.11 Connection to AC Line Voltage

If connection to the AC power line is made with a plug at the end of the cable, the outlet to which it is inserted must be close by and easily accessible. The outlet must also be rated for the maximum power consumption, which can be considered equal to the nominal power of the connected power supplies.

If the Terminal Distributor is connected in a fixed electrical plant, a circuit breaker must be provided in order to completely disconnect the AC line voltage form the Cradle Dispenser cabinet. This circuit breaker must be positioned close to the cabinet and be easily accessible. It must also be rated for the maximum power consumption and must meet the Safety Normative currently in force.

5.4 JOYA™ X1 CRADLE DISPENSER FIRMWARE

JOYA Cradle Dispenser is provided with a full operational Firmware, therefore it doesn't require any kind of software devoloping activitiy Instead, the behaviour of the JOYA Cradle Dispenser could be controlled at high level using the JOYA™ X1. In SDK Tools is furnished the JOYA Cradle tool program, to upgrade JOYA Cradle Dispenser firmware release.

5.4.1 JOYA Cradle Tool installation

By using *ActiveSync* copy in the *\BACKUP\CTOOLS* folder the following file*:*

- JOYA_Cradle_Tool.exe

copy in the *\BACKUP\CTOOLS\fr-FR* folder the following file

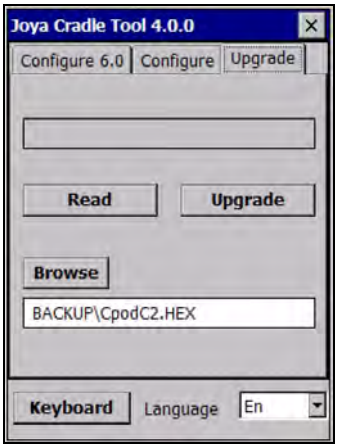
- JOYA_Cradle_Tool.resources.dll

Copy in the \Backup\windows folder the following files

- audio.dll
- charger.dll
- cradle.dll
- image.ddraw.dll
- image.dll
- lowlevel.dll
- network.dll
- scanner.dll

5.4.2 Starting program

Run JOYA_Cradle_Tool application, select the tab *Upgrade* by using the upper left key or the touch screen

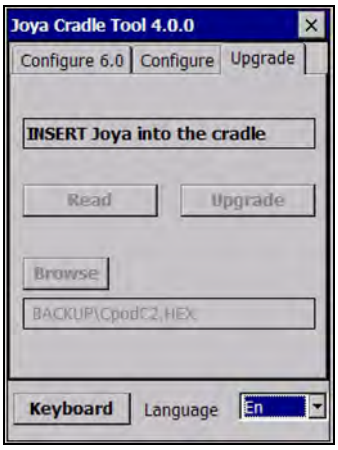


The screen displays the JOYA Cradle Tool version and the mode to interact with the cradle (Read or Upgrade).
Use the touch screen or:

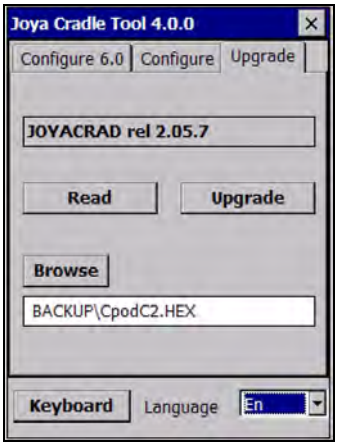
- Use the upper left key (F1) to select the tab.
- Use the upper right key (F2) to browse in the screen.
- Use the “e” key (ENTER) to quit.
- Use the “=” key (ESC) to select the language (when language is focused).

5.4.3 Reading firmware version

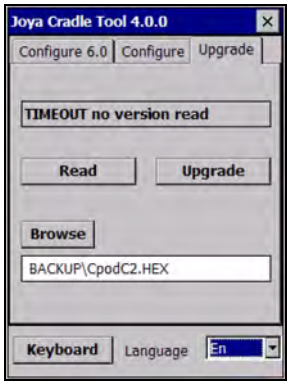
Select the “Read”. JOYA Cradle Tool will display the message:



Insert in any cradle’s slot and the result will look as:



Cradle locks terminal in the slot and unlock after a successful reading. If read fails, unlock the terminal by approaching a magnet to the sensitive area (see picture below).



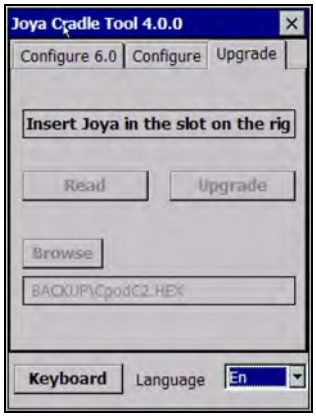
5.4.4 Firmware update procedure

CAUTION	*This is a very uncommon procedure. To perform the firmware update you should be advised by Datalogic which will provide the upgrading firmware file* CpodC2.HEX

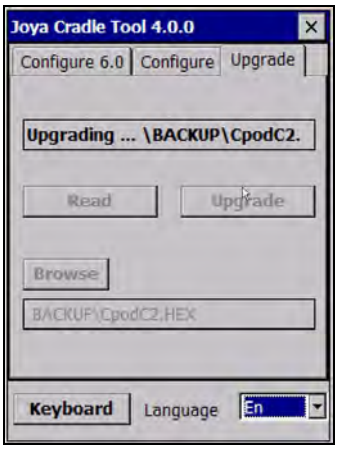
Copy in the \Backup folder the file

- CpodC2.HEX (cradle's latest firmware provided by Datalogic)

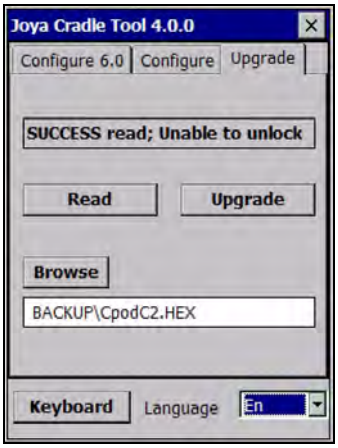
Select the “Upgrade” key and insert the terminal into the rightmost slot of the cradle.



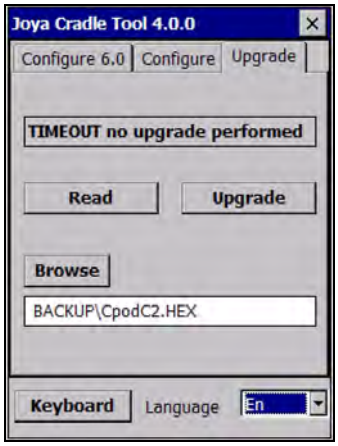
The cradle locks the terminal and JOYA Cradle Tool transfer firmware.



During this period, slot led flashes. At the end, the terminal top flashes three times; approach a magnet to the sensitive area to unlock and extract the terminal.

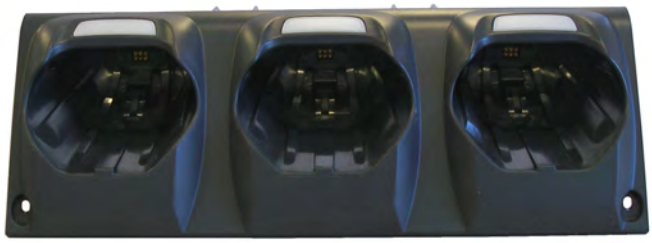


JOYA Cradle Tool shows a suitable message to inform user if update is correctly completed or an error has been occurred.



5.5 JOYA™X1/JOYA CRADLE DISPENSER CONNECTION

JOYA Cradle Dispenser is equipped with an electrical-serial connection, used to exchange command and response with JOYA™ X1. The communications between the terminal inserted into the slot and the slot itself are performed by means of a special “RPC like command-response” protocol.



5.6 CONFIGURATION

JOYA Cradle Dispenser should be previously configured using an apposite program: JOYA Cradle Tool (see SDK Help for more information).

In a typical application there is the need to identify in a unique way each cradle slot, in order to be able to perform selective operations. This requirement is satisfied by each JOYA Cradle Dispenser slot, by means of a set of four parameters, called Config Parameters:

Slot ID: is a string of 2 bytes
Dispenser ID: is string of 1 byte
IP address: is a string of …bytes
Port ID: is a string of 2 bytes
Using this four byte strings it is possible to setup and identify each slot in a unique way.
This Config Parameters are stored in the permanent memory location dedicated of each slot. They can be configured making use of the JOYA Cradle Tool and they can be read by a well inserted JOYA™ X1.

5.7 USE AND FUNCTIONING

Insert a JOYA™ X1 inside a slot, JOYA Cradle Dispenser will lock the JOYA™ X1, when electrical connectors are contacted.
To unlock JOYA™ X1, approach a magnet to the sensitive area and extract the JOYA™ X1.

All other commands could be developed by developers using JOYA SDK.

6 TECHNICAL FEATURES

6.1 JOYA™ X1 TECHNICAL DATASHEET

WIRELESS COMMUNICATIONS	
LOCAL AREA NETWORK (WLAN)	IEEE 802.11 b/g/n; WiFi Security Standards, WEP, WPA, TKIP, WPA2, CCX 4 compatible.
DECODING CAPABILITY	
1D / LINEAR CODES	Auto discriminates all standard 1D codes including GS1 DataBar™ linear codes.
ELECTRICAL	
BATTERY*	Removable battery pack with rechargeable Li-polymer batteries
ENVIRONMENTAL	
DROP RESISTANCE**	Withstands drops from 1.2 meters onto concrete - 3.94 feet.
TEMPERATURE	Operating: 0 to 40 ºC / 32 to 104 ºF.
INTERFACES	
INTERFACES	USB 1.1 Client (with standard micro USB connector) It is not possible to use the USB when the device is inserted in a wall mounted cradle.
PHYSICAL CHARACTERISTICS	
BUMPERS	Top and bottom rubber bumpers (lighting on top bumper); standard available colours: Blue, Green, Red, Orange.
DIMENSIONS	Dimensions 149 x 73 x 44 mm - 5.86 x 2.87 x 1.73 inc
DISPLAY	**JOYA™ X1 Basic**: Display 2.8 inches high-contrast colours graphic TFT LCD, 65k colors, 320 x240 pixels QVGA. **JOYA™ X1 Plus**: Display 2.8 inches high-contrast colour graphic TFT LCD, 65k colours, 320 x240 pixels QVGA Touch screen 4-wire resistive touch panel.
KEYBOARD	6 (six) fully programmable keys in standard available colours: Blue, Green, Red, Orange.
TOP COVER	In-mould decorated plastic cover (optionally customizable).
WEIGHT	255 g (with battery) - 0.562 lb.

READING PERFORMANCE	
READER	1D Linear CCD imager engine; Scan rate: 50 scans/sec
READING INDICATORS	Beeper (Polyphonic audio codec); Green Spot "On Code" good reading feedback (Datalogic patented feature).
SAFETY & REGULATORY	
AGENCY APPROVALS	The product meets necessary safety and regulatory approvals for its intended use.
ENVIRONMENTAL COMPLIANCE	Complies to EU RoHS.
SOFTWARE	
CONFIGURATION AND MAINTENANCE	Wavelink Avalanche® device management pre-licensed, available upon request. Datalogic Configuration Utility (DCU).
DEVELOPMENT	SDK Suite available upon request.
SYSTEM	
MEMORY	**JOYA™ X1 Basic**: System RAM: 128 MB; System Flash: 512 MB Flash Disc **JOYA™ X1 Plus**: System RAM: 128 MB; System Flash: 512 MB Flash Disk; 4 GB additional Flash.
MICROPROCESSOR	XScale™ PXA310 @ 624 MHz; 32 bit.
OPERATING SYSTEM	Microsoft Windows CE 6.0.

*JOYA X1 should be charged at an ambient temperature between 0 - 35º C to achieve the maximum charging rate. Never charge the main device or spare batteries in a closed space where excessive heat can build up 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.

7 TEST CODES

High Density Codes

0.25 mm (10 mils)

Code 39 !I7I62H!

17162

2/5 Interleaved Ë"8NduÌ

0123456784

Code 128 ÌtestwÎ

test

80%

EAN 13 x(0B2DE5*KKKKLM(

80%

EAN 8 (6450*TRMN(

Medium Density Codes

0.38 mm (15 mils)

Code 39 !17162H!

17162

Interleaved 2/5 Ë"8NduÌ

0123456784

Code 128 ÌtestwÎ

test

100%

EAN 13 x(0B2DE5*KKKKLM(

100%

EAN 8 (6450*TRMN(

Low Density Codes

0.50 mm (20 mils)

Code 39 !I7I62H!

17162

Interleaved 2/5 Ë"8NduÌ

0123456784

Code 128 ÌtestwÎ

test

120%

EAN 13 x(0B2DE5*KKKKLM(

120%

EAN 8 (6450*TRMN(

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.

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.

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.

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CE 13

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40012 - Lippo di Calderara
Bologna - Italy

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JOYA X1

modelli con funzionalità radio 802.11 b/g
models with 802.11 b/g radio feature
modèles avec 802.11 b/g radio intégrés
modelle mit 802.11 b/g radio-funktionalität
modelos con funcionalidad radio 802.11 b/g

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
are in conformity with the requirements of the European Council Directives listed below
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
der nachstehend angeführten Direktiven des Europäischen Rats:
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

1999/5/EC R&TTE and 2011/65/EU RoHS

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante ed è basata sulla conformità dei prodotti alle norme seguenti:
This declaration of conformity is issued under the sole responsibility of the manufacturer and is based upon compliance of the products to the following standards:
Cette déclaration de conformité est établie sous la seule responsabilité du fabricant et repose sur la conformité des produits aux normes suivantes:
Diese Konformitätserklärung wurde unter alleiniger Verantwortung des Herstellers ausgestellt und basiert darauf daß das Produkt den folgenden Normen entspricht:
La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante y se basa en el cumplimiento de los productos con la siguientes normas:

EN 55022: 2010 (CLASS B ITE)	*INFORMATION TECHNOLOGY EQUIPMENT RADIO DISTURBANCE CHARACTERISTICS LIMITS AND METHODS OF MEASUREMENTS*
EN 55024: 2010	*INFORMATION TECHNOLOGY EQUIPMENT IMMUNITY CHARACTERISTICS LIMITS AND METHODS OF MEASUREMENT*
ETSI EN 301 489-1 v1.9.2 : 2011	*ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART1: COMMON TECHNICAL REQUIREMENTS*
ETSI EN 301 489-17 v2.2.1: 2012	*ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT; PART 17: SPECIFIC CONDITIONS FOR 2,4 GHZ WIDEBAND TRANSMISSION SYSTEMS, 5 GHZ HIGH PERFORMANCE RLAN EQUIPMENT AND 5,8 GHZ BROADBAND DATA TRANSMITTING SYSTEMS*

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ETSI EN 300 328 v1.7.1 : 2006	*ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); WIDEBAND TRANSMISSION SYSTEMS; DATA TRANSMISSION EQUIPMENT OPERATING IN THE 2,4GHZ ISM BAND AND USING WIDE BAND MODULATION TECHNIQUES; HARMONIZED EN COVERING ESSENTIAL REQUIREMENTS UNDER ARTICLE 3.2 OF THE R&TTE DIRECTIVE*
EN 60950-1:2006 AMENDMENT A11:2009 AMENDMENT A1: 2010 AMENDMENT A12: 2011	*INFORMATION TECHNOLOGY EQUIPMENT - SAFETY - PART 1 : GENERAL REQUIREMENTS*
EN62471:2008	*PHOTOBIOLOGICAL SAFETY OF LAMPS AND LAMPSYSTEM*
EN 50566:2013	*EUROPEAN STANDARD EN 50566: PRODUCT STANDARD TO DEMONSTRATE COMPLIANCE OF RADIO FREQUENCY FIELDS FROM HANDHELD AND BODY-MOUNTED WIRELESS COMMUNICATION DEVICES USED BY THE GENERAL PUBLIC (30 MHZ - 6 GHZ)*
EN62209-2: 2010	*HUMAN EXPOSURE TO RADIO FREQUENCY FIELDS FROM HAND-HELD AND BODY-MOUNTED WIRELESS COMMUNICATION DEVICES. HUMAN MODELS, INSTRUMENTATION, AND PROCEDURES. PROCEDURE TO DETERMINE THE SPECIFIC ABSORPTION RATE (SAR) FOR WIRELESS COMMUNICATION DEVICES USED IN CLOSE PROXIMITY TO THE HUMAN BODY (FREQUENCY RANGE OF 30 MHZ TO 6GHZ)*
EN50581:2012	*TECHNICAL DOCUMENTATION FOR THE ASSESSMENT OF ELECTRICAL AND ELECTRONIC PRODUCTS WITH RESPECT TO THE RESTRICTION OF HAZARDOUS SUBSTANCES*

Lippo di Calderara di Reno, October 18, 2013

Ruggero Cacioppo

Quality & Reliability MGR
Datalogic ADC S.r.l.