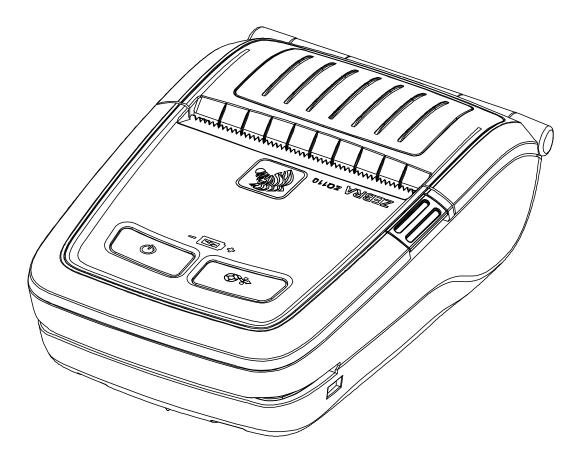


# ZQ110

## Mobile Printer Unified Utility Manual



P1069081-001 Rev. A

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

WARNING: Exposure to Radio Frequency radiation. To conform to FCC RF exposure requirements this device shall be used in accordance with the operating conditions and instructions listed in this manual.

NOTE: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

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## 1. Notice

This Unified Utility Manual provides information on the utility program used to set printer operation conditions and add functions.

The utility program consists of three functions.

- 1. A function that sets printer operation conditions via non-hardware control, software-based virtual switches (VMSM: Virtual Memory Switch Manager).
- 2. A function that facilitates the downloading of image files, such as logos, intended for repetitive printing **(NV Image Download Manager)**.
- 3. A function that downloads and installs the latest firmware, which is subject to ongoing modifications for the enhancement of product performance (Firmware **Download Manager**).

## 2. Operating System (OS) Environment

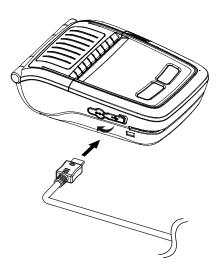
The following operating systems are supported:

- Microsoft Windows XP (32bit/64bit)
- Microsoft Windows 2003 Server (32bit/64bit)
- Microsoft Windows Embedded For Point Of Service
- Microsoft Windows VISTA (32bit/64bit)
- Microsoft Windows 7 (32bit/64bit)
- Microsoft Windows 8 (32bit/64bit)
- Microsoft Windows CE 5.0
- Microsoft Windows CE 6.0
- Microsoft Windows Mobile 5.0
- Microsoft Windows Mobile 6.x

## 3. Virtual Memory Switch Manager

#### 3-1 When Using on a PC

1. Connect the printer and the PC via the interface cable (USB type). If using Bluetooth, a cable connection is not necessary.



- 2. Turn on the printer.
- Prepare the Unified Utility executable file to be used on the PC. The executable file can be found on the enclosed CD. (ZQ110\_Unified Utility for PC ver 1.x.x.exe)
- 4. Run the Unified Utility executable file.

#### 5. Select Port and click Virtual Memory Switch Manager.

Refer to the *Bluetooth Connection Manual* regarding the port (may vary according to device).

ZQ110_Unified Utility for PC V1.0.0         Description         * Select Menu This application is ZQ110 Unified Utility. You can change communication setting, code page and download NV image, etc.			
Communication Setti	ng		
Interface :	USB	•	Virtual Memory Switch Manager
Port :	USB01	•	
Baud Rate :		-	NV Image Manager
Data Bits :		<b>_</b>	
Stop Bits :		<b>_</b>	Firmware Manager
Parity :		-	
Flow Control :		-	Exit

- 6. The Virtual Memory Switch settings for the printer displays.
  - a. In a Printer Setting tab 1, printer density, speed and code page setting is available.

Printer Setting 1 Printer Setting 2 P		×
Printing Density	Printing Speed	•
Default Code Page		
Default Font Type	C Font B (9 x 17)	C Font C ( 9 x 24 )
Double Byte Font Mode	• On _PC437	
	-	
Default	Save	Cancel

b. In a Printer Setting tab 2, black mark, beep sound(beeping) setting according to the paper status is available.

Printer Setting 1 Printer Setting 2 Printer interface	
Black Mark	Receipt
Beep For Roll Paper End	Off
Beep Mode For Low Battery End	On 💌
Auto Power Off Time (Not Connected)	0 min (0~90 ex> 30)
Auto Dower Source Time (Connected)	
Auto Power Saving Time (Connected)	10 sec (0, 10~255 ex> 100)
MFi Mode (iOS)	10 sec (0, 10~255 ex> 100)
	10 sec (0, 10~255 ex> 100)
MFi Mode (iOS)	
MFi Mode (iOS)	
MFi Mode (iOS)	
MFi Mode (iOS)	▼ Advance

c. "Advance" button allows to set sentinel option

Advanced MSR Settings
C None C Static Sentinel © Dynamic Sentinel
Track1 Start Code STRAT1 Track1 End Code END
Track2 Start Code STRAT2 Track2 End Code END
Track3 Start Code STRAT3 Track3 End Code END
ASCII (ex: "START(1)")

d. In a Printer Interface tab, bluetooth information setting is available.

Virtual Memory Switch Manager (fw:V01.00P06 STDa BT_TEST 072314)
Printer Setting 1 Printer Setting 2 Printer interface
Serial Interface Configuration
Baud Rate 115200   Parity None
Data Bits 8 Flow Control DTR/DSR
Enable Bluetooth Setting     Bluetooth Interface Configuration     Authentication _Encryption     Enable     Mode 2
PIN Code
Default Save Cancel

 After setting the desired function(s), click Save to store the settings. The functions per category are as follows:

Function	Description
Printing Density	Sets printing density Value range: 80-150%
Printing Speed	Sets printing speed Value range: 50 or 90 mm/s
Default Code Page	Sets the default code page (Refer to the <i>Code Page Manual</i> for more detailed information on supported Code Pages.)
Default Font Type	Sets default font type and size
Double Byte Character Mode	Sets double byte language usage mode
Black Mark	Black Mark change receipt mode or black mark mode.
Beeps for Paper Roll End	Sets no beeping or beeping when reaching paper roll end
Beeps for Low Battery End	Sets beeping when reaching low battery capacity
Auto Power Off Time	Sets time interval between idle printer and automatically turning off printer power
Auto Power Saving Time	Sets time interval for automatically entering into power saving mode while the printer is in use
MSR (Magnetic Stripe Reader) Trigger	Sets MSR data scanning mode, 7 modes supported (Refer to "GS ( E" in the "Command Manual".)
RF Interface Configuration	Sets Wireless connection type (WLAN, Bluetooth)
Serial Interface Configuration	Changes the Serial Interface setting * After changing this setting, printer must be reset for the change to take effect.
Authentication & Encryption	Sets or cancels Authentication & Encryption mode when connecting via Bluetooth * If Authentication & Encryption mode is disabled, connection to a device can be done without entering a PIN.
Connection Mode	<ul> <li>Sets Mode1, Mode2, or Mode3 when connecting via Bluetooth.</li> <li>Mode1: Connection possible only with the first device with which connection succeeds.</li> <li>Mode2: Connection with all Bluetooth-enabled devices possible via a PIN.</li> <li>Mode3: Connection possible only with the first device with which connection succeeds, and searches for or use of connected device possible.</li> </ul>
PIN Code	Changes the PIN required for Bluetooth connections. (maximum 12 characters long)
Printer Name	Changes the device name created when establishing a Bluetooth connection (maximum 12 characters long)

\* You may check authentication, Encryption mode as well as Connection mode of the Bluetooth from self test page.

8. Reset the printer.

#### <u>ZQ110</u>

#### 3-2 When Using on a PDA

- 1. Turn on the printer.
- Prepare the Unified Utility executable file to be used on the PDA.
   The executable file varies according to CPU and may be found on the enclosed CD.

- ARMV4: ZQ110\_Unified Utility for PPC armv4 ver 1.x.x.exe - ARMV4I: ZQ110\_Unified Utility for PPC armv4i ver 1.x.x.exe

- 3. Run the Unified Utility executable file.
- Select **Port** and click **Virtual Memory Switch Manager**.
   Refer to the *Bluetooth Connection Manual* regarding the Port (may vary according to device).

A ZQ110_	Unified Utility 🛟 ┥× 3:29	ok
	cation Setting	
IP:	192.168.0.144	
Port :	9100	
Virtual Me	mory Switch Manager	
		•
r	NV Manager	
	NV Manager 9 Download Manager	

5. The Virtual Memory Switch settings for the printer are received and display.

6. After setting the desired function, click **Next**.

(The functions per category are identical to those on the PC.)

\* Click **Default** to return the printer to the default settings.

🄁 ZQ110_Unified Utility 📰 ላ 3:29 💽
Printing Speed :
90mm/s 🔻
Printing density :
print density 100% 👻
Default Font Type 12x24 A Font
Default Next Cancel

 After setting the desired function, click Next. (Clicking Prev returns to the previous screen.)

AT 2Q110_Ur 2	nified Utility 井 ┥× 3:29 💽	🛃 ZQ110_Un	ified Utility 👫 ┥× 3:29 🛛 ok
Default Code F	Page	Sentinel Onti	<b>A</b> 12
PC437 - USA,	Standard Europe 🛛 🔻	Sentinel Opti	Static 🔘 Dynamic
MSR Trigger m	node		
Track 1/2/3 re	ead mode AUTO trig 🔻	Track1 Start	START1
	Advance	Track1 End	END1
Black Mark		Track2 Start	START2
Receipt	🔿 Black Mark	Track2 End	END2
<u> </u>	Ŭ	Track3 Start	START3
		Track3 End	END3
Prev	Next Cancel	ASCII	OK Cancel

8. After setting the desired function, click **Next**.

🍠 ZQ110_	Unified Utility	/ 📰 ┥× 3:29 ok
Beeps for ro	ll paper end	
	🔘 False	○ True
Beep mode f	or low batte	ry status
	🔘 On	◯ Off
Double byte	character m	ode
	🔘 On	
MFI ( iOS ) :	🔿 Enable	Disable
Prev	Next	Cancel

9. After setting the desired function, click **Next**.

National Section 20110_Unifi	ed Utility 🐥	<b>▲ ×</b> 3:29	ok	
∫ Serial Interface configuration—				
Baudrate :	115200	•		
Parity :	None	•		
Data Length :	8	-		
Flow control :	DTR/DSR	•		
Auto Power Off <0~90 min>	Time	10		
Auto Power Sav Time <0,10~25		15		
Prev	Next C	Cancel		

10. After setting the desired function, click **Save**.

矝 ZQ110_Unified Utility 📰 📢 3:29 🛛 ok
Enable to change BT Setting
Authentication & Encryption Disable Enable Connection mode
│
*
Printer Name <max 30="" chars=""></max>
ZQ110
Prev Save Cancel

11. Reset the printer.

## 4. NV Image Download Manager

#### 4-1 When Using on a PC

- 1. The printer connection method and instructions for running the Unified Utility executable file are identical to those provided in section **3. Virtual Memory Switch Manager**. Refer to the aforementioned section.
- 2. Prepare the image file on the PC (for example, Main.bmp)
- 3. Select Port and click NV Image Manager.

Refer to the *Bluetooth Connection Manual* regarding the Port (may vary according to device).

110 Unified Utility. You c tc.	an change comm	unication setting, code page and
]		
USB	•	Virtual Memory Switch Manager
USB01	•	
	-	NV Image Manager
	<b>_</b>	
	-	Firmware Manager
	<b>_</b>	
,	-	Exit
	J J USB	

 Click Add Image to add the desired image(s) to the image list. Click Remove to delete selected image(s), and click Reset to delete the entire image list.

NV Image Manager	Image Li	st <lmages: -="" 2="" mei<="" th=""><th>mory: 8400/26</th><th>52144 (Byte)&gt;</th></lmages:>	mory: 8400/26	52144 (Byte)>
	No. 1 2	Name Printer.bmp PrinterCE.bmp	Size 4200 B 4200 B	NV Image List
				Refresh Print All
Change Color Range Brightness		id Image 🛛 🗖 Auto. Semove	Addressing	Print Remove Remove All
0 10		Reset	vnload	Exit

5. The NV Image List contains the address numbers of saved images.

The following buttons can be used to handle saved images.

- Print All: Prints all images in the list
- **Print**: Prints selected image(s)
- Remove All: Delete all images

NV Image Manager		×
	Image List < Images: 2/2 - Memory: 8400/2	262144 (Byte)>
	No. Name Size	NV Image List
	1 Printer.bmp 4200 B	10 11
	2 PrinterCE.bmp 4200 B	
		Refresh
		Print All
		Print
Change Color Range	Function	
Brightness	Add Image 🔲 Auto Addressing	Remove
		Remove All
	Remove Download	
0 10(	Reset	Exit

6. After selecting an image from the image list, adjust the brightness level to set the brightness of the image to be downloaded.

NV Image Manager	Image List <images: -="" 2="" 8400="" <="" memory:="" th=""><th>262144 (Byte)&gt;</th></images:>	262144 (Byte)>
	No.         Name         Size           1         Printer.bmp         4200 B           2         PrinterCE.bmp         4200 B	NV Image List
		Refresh Print All
Change Color Range	-Function Add Image Auto Addressing Remove Download	Print Remove Remove All
0 10(	Reset	Exit

7. Click **Download** to download the image(s).

Checking **Auto addressing** automatically saves address numbers. (Manual input is required if unchecked.)

		Image List	<lmages< th=""><th>: 2/2 - Men</th><th>nory: 8400/26</th><th>62144 (Byte)&gt;</th></lmages<>	: 2/2 - Men	nory: 8400/26	62144 (Byte)>
		No.	Na	me	Size	NV Image List
		1	Printe Printer0		4200 B 4200 B	10 11
		-	1 millione	.c.onp	4200 0	
						Refresh
						Print All
						Print
Change Color Range		Function	·			Remove
Brightness		Add	Image	Auto A	Addressing	
		Re	move	_		Remove All
			eset	Dow	nload	
U	100		esei			Exit

8. When downloading is complete, the saved address numbers appear in the **NV Image List**.

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#### 4-2 When Using on a PDA

- 1. Turn on the printer power.
- Prepare the Unified Utility executable file to be used on the PDA.
   The executable file varies according to CPU and may be found on the enclosed CD.
  - ARMV4: ZQ110\_Unified Utility for PPC armv4 ver 1.x.x.exe
  - ARMV4I: ZQ110\_Unified Utility for PPC armv4i ver 1.x.x.exe
- 3. Prepare the image file on the PDA (for example, Main.bmp)
- 4. Run the Unified Utility executable file.

#### 5. Select **Port** and click **NV Manager**.

Refer to the *Bluetooth Connection Manual* regarding the port (may vary according to device).

餐 ZQ110	_Unified Utility 📰 ┥× 4:3	0 <b>ok</b>
	ication Setting	
IP:	192.168.0.144	
Port :	9100	
Virtual M	emory Switch Manager	
	NV Manager	
Firmwa		
	Exit	

- 20 -

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6. Click **Add Image** to add the desired image(s) to the image list. Click **Remove** to delete selected image(s), and click **Reset** to make modifications.

🚰 ZQ110_Unified Util	ity 🛟 ┥× 4:38 🛛 ok
Image File List 3_inch.bmp child_370.bmp	Address 10 11
Add Image	Refresh
Remove	Print All
Reset	Print
Auto addressing	Remove
Download	Remove All
Exit	

7. The **Address** field contains the address numbers of saved images.

The following buttons can be used to handle saved images.

- **Print**: Prints selected image(s)
- Print All: Prints all images in the list
- **Remove All**: Delete all images

A ZQ110_Unified Util	ity 📰 ┥× 4:38	3 <b>ok</b>
Image File List 3_inch.bmp	Address	
child_370.bmp	11	
Add Image	Refresh	
Remove	Print All	
Reset	Print	
Auto addressing	Remove	
Download	Remove All	
Exit		

8. Click **Download** to download the image(s). Automatically saves address numbers. (Start Address is "00".)

A ZQ110_Unified Uti	lity 🛟 ┥× 4:38 🛛 ok
Image File List 3_inch.bmp child_370.bmp	Address 10 11
Add Image	Refresh
Remove	Print All
Reset	Print
Auto addressing	Remove
Download	Remove All
Exit	

9. When downloading is complete, the saved address numbers appear in the "address".

### 5. Firmware Download Manager

#### 5-1 When Using on a PC

The printer is already equipped with standard firmware.

#### To download and install firmware on the ZQ110 printer, follow the steps below:

- 1. The printer connection method and instructions for running the Unified Utility executable file are identical to those provided in section **3. Virtual Memory Switch Manager**. Refer to the aforementioned section.
- 2. Prepare the firmware file on the PC. Firmware can be upgraded to improve printer performance.
- 3. Select **Port** and click **Firmware Manager**.

Refer to the *Bluetooth Connection Manual* regarding the port (may vary according to device).

ZQ110_Unified Util	ity for PC V1.0.0		×
Description * Select Menu This application is Z0 download NV image,	)110 Unified Utility. You ca etc.	an change comm	nunication setting, code page and
Communication Settin	g		1
Interface :	USB	-	Virtual Memory Switch Manager
Port :	USB01	-	
Baud Rate :		-	NV Image Manager
Data Bits :		-	
Stop Bits :		<b>_</b>	Firmware Manager
Parity :		-	
Flow Control :		-	Exit

4. Download firmware; refer to section **5-3 Instructions for Firmware Download** for specifics.

#### 5-2 When Using on a PDA

The printer is already equipped with standard firmware.

#### To download and install firmware on the ZQ110 printer, follow the steps below:

- 1. Turn on the printer power.
- Prepare the Unified Utility executable file to be used on the PDA.
   The executable file varies according to CPU and may be found on the enclosed CD.
- ARMV4: ZQ110\_Unified Utility for PPC armv4 ver 1.x.x.exe
- ARMV4I: ZQ110\_Unified Utility for PPC armv4i ver 1.x.x.exe
- 3. Prepare the Firmware file on the PDA. Firmware can be upgraded to improve printer performance.
- 4. Run the Unified Utility executable file.
- 5. Select **Port** and click **Firmware Download Manager**. Refer to the *Bluetooth Connection Manual* regarding the port (may vary according to device).

考 ZQ110	_Unified Utility 井 ┥× 4:30 🛛	oł
	ication Setting	
IP:	192.168.0.144	
Port :	9100	
Virtual M	emory Switch Manager	
	NV Manager	
Firmwai	re Download Manager	
	Exit	

6. Download firmware; refer to section **5-3 Instructions for Firmware Download** for specifics.

#### 5-3 Instructions for Firmware Download

- 1. Open the Unified Utility.
- Run the Firmware Download Manager to download the firmware file (extension: \*.fls).

Firmware Download Manager	×
Download progress	]
Status : Select Firmware File(*.fls).	
Start Download	
	Exit

- 3. While downloading the firmware, the printer's status advances as follows:
  - a. Green LED lights are lit.
  - b. Red LED lights are lit.
  - c. Blue LED lights are lit.
  - d. All three LED's turn on.
- 4. After step 3 is complete, reset the printer.
- 5. Open the Unified Utility.
- 6. Run Firmware Download Manager to download the font file (extension: \*.fls) which matches your downloaded firmware.

The list below provides a map of font files to firmware.

- In case of KROB: mobile\_godic.fls
- In case of CHOB: mobile\_big5.fls
- In case of CNOB: mobile\_gb2312.fls
- In case of JPOB: mobile\_japfont.fls

Note: You do not need to reset the printer to use the fonts. You do not need to download the fonts in any specific order.

7. After downloading the firmware and fonts, you will need to set the memory switches according to user preferences and printer hardware settings.