

Installation Guide

for EMPRESSTM 2.4GHz Active RFID Reader

(Model: HKRAR-EMWF)

Revision: 1

Before use, please read these instructions completely

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1.1 Introduction

Thank you for purchasing EMPRESSTM Reader, it is wireless and therefore is easy to install with low installation costs. It is a 2.4GHz Gain Adjustable Reader which uses the advanced 0.18um CMOS IC, and is well-fitted for being a Data Collector.

Through IEEE 802.11b/g (EMWF version), the reader gathers and transmits data to the wireless router or act as access point all by itself. Once powered, the HKRAR-EM series is instantly connected and become part of the network.

HKRAR-EMWF Active reader is user friendly with a web interface. You can get data and do analysis with a PC in an efficient way with its Wi-Fi feature. Its Omni-directional antenna can identify tags from all directions. Users can adjust the identification distance according to actual situations in order to make identification more accurate.



1.2 System Overview



1.2.1 Specification

Direction	Omni-directional, standard rubber antenna
Range	30~50m (depends on different Active RFID Tags),
Frequency	2.4GHz2.5GHz ISM
RF Output Power	0dBm
Sensitivity	-85dBm
Power	500mA,5V
Modulation	GFSK
Software Interface	Xtractorm, .Net Platform
Data Rate	1Mbps
Operating Temperature	-40~60`C
Operating Humidity	95% (Non-condensing)
Anti-collision	200 tags simultaneously, shown within 5 sec.
Interface	WI-FI, IEEE 802.11b/g. can act as AP
Dimension	125mm * 108mm * 26mm



1.2.2 Components

One standard package of this product consists of following items;

- EMPRESS Reader x 1 piece
- 2.4GHz Antenna x 2 pieces
- DC Power Adaptor 5V 2.5A x 1 piece
- A Cross Cat-5 Cable (optional)

Other Essential Components

- Active Transponders from Hong Kong RFID
- Personal Computer
 Minimum PC Requirements: XXXXXX

NOTE:

Active Transponders are essential to test the system and they are sold separately. Please contact your sales representative if you do not have any active transponders.

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1.2.3 Network Setup

XXX mode

XXX mode (external antenna for illustration)





[Type sidebar content. A sidebar is a standalone supplement to the main document. It is often aligned on the left or right of the page, or located at the top or bottom. Use the Text Box Tools tab to change the formatting of the sidebar text box.

Type sidebar content. A sidebar is a standalone supplement to the main document. It is often aligned on the left or right of the page, or located at the top or bottom. Use the Text Box Tools tab to change the formatting of the sidebar text box.]



1.2.4 Application: Access Control System



Fig.3 Overview of the access control system

The system can control an automatics door to achieve the purpose of access control. The results of the reader captured are recorded in the Controller.

1.2.5 Application: Location System





1.3 Reader Indicators

	Name	Function / Description
1	DC Power Jack	Supply power
2	Red LED	Power ON
3	Green LED	Data processing identity
4	NETWORK	Connect to PC to reader
5	RESET	Reboot button
		Please hold the button for 5sec
6	Wifi	For Wifi Antenna
7	ANT	For any 2.4GHz antenna, directional or omi-directional





1.3.1 Omni–directional Antenna for Empress Active Reader

This antenna detects all tags in range from all angles.



Technical Specification:

Frequency Range (MHz)	2400-2483	-
Bandwidth(MHz)	83	
Gain (dBi)	8	
VSWR	<=1.5	
Impedance (ohm)	50	
Max. Power (W)	50	
Connector	N Female	
Dimension (mm)	145 x 97 x 38	
Weight (g)	210	

1.3.2 Directional Antenna for Empress Active Reader (Optional)

Directional antenna only detects tags in specific angle. Please note that the antenna has horizontal and vertical orientation.





Long Range Directional 2.4GHz Antenna: HKRAA-2417

Electrical Specification		
Frequency Range	2400-2500MHz	
VSWR	≤ 1.5	
Input Impedance	50Ω	
Gain	17dBi	
Polarization Type	Vertical or Horizontal	
Hoizontal Plane O _{HP}	$20\pm2^{\circ}$	
Vertical Plane Θ_{HP}	$20\pm2^{\circ}$	
Front to Back Ratio	\ge 26dB	
Maximum Input Power	6W	
Connector Type	N -Female	
Lightning Protection	DC ground	
Mechanical Specifications		
Dimension	305 mm imes 305 mm imes 25 mm	
Weight	1.5Kg	
Rated Wind Velocity	210km/h	
Radome material	UV-Resistance ABS	
Working Temperature	-40~60 ℃	







Mid Range Directional 2.4GHz Antenna HKRAA-2414

Electrical Specification		
Frequency Range	2400-2500MHz	
VSWR	≤ 1.5	
Input Impedance	50Ω	
Gain	14dBi	
Polarization Type	Vertical or Horizontal	
Hoizontal Plane Θ _{HP}	30 ± 2°	
Vertical Plane Θ _{HP}	30 ± 2°	
Beam Electrical Down tilt	0°	
Front to Back Ratio	≥ 25dB	
Maximum Input Power	50W	
Connector Type	N -Female	
Lightning Protection	DC ground	
Mechanical	Specifications	
Dimension	190mm $ imes$ 190mm $ imes$ 30mm	
Weight	0.5Kg	
Rated Wind Velocity	210km/h	
Radome material	UV-protected ABS	
Diameter of Mounting pole	φ30 —φ54mm	
Working Temperature	-40~+60°C	







1.4 First Time Installation:

- 1) Take out the reader from the box and connect the all two antenna (ANT and WiFi) at the back of the reader
- 2) Plug the power adapter in the power jack. The red LED will turn on.
- 3) Connect the reader to a PC with Cross Cat 5 cable
- 4) Open your web browser and type **192.168.1.254** (if cannot open the setting page, try to turn off other connections, e.g. WIFI)



5) A dialog box will prompt you for the User name and Password. Enter the default values and click OK. Default login of setup page

user name: admin

password : admin

Connect to 192.1	68.1.254 🛛 🛛 🔀
	GE
WIZ610wi (username:	: admin)
<u>U</u> ser name:	😰 admin 🛛 👻
<u>P</u> assword:	•••••
	<u>R</u> emember my password
	OK Cancel

6) Continue the following setting step, the setup page will be display after log-in.





- 7) Select **Network Setting** on the left column. The LAN Interface Setup will display.
- Select an idle IP address on your network and Enter in the IP Address. Enter the Subnet Mask and Default Gatway of your network. Disabled DHCP. Press Apply Changes.

🗿 WLAN Gateway Modu	ıle WIZ610wi - Microsoft Ir	nternet Explorer				
File Edit View Favorit	es Tools Help			li pul pul d		
🔇 Back 🝷 🕥 🕤 🖪 🕻	🔇 Back 🔹 🕤 🕤 📓 🚷 🔎 Search 👷 Favorites 🤣 🙆 🔹 😓 🕞 🥵 😫					
Address 🛃 http://192.168.	1.254/			~	Links »	
	HONG S	RFID				
Status		LAN Interface S	Setup		^	
<u>Network Setting</u>						
 Wireless Setting Security 	This page is	IP Address:	192.168.11.123	1		
• Others	configure the	Subnet Mask:	255.255.255.0	1		
	parameters for	Default Gateway:	0.0.0.0			
	local area	DHCP:	Disabled 🐱			
	connects to	DHCD Client Danger	192.168.1.2 -			
	the LAN port of	DITCP Chent Range.	192.168.1.100	Show Client		
	your Access	DNS Server1:]		
	vou mav	DNS Server2:]		
	change the setting for IP	Apply Changes	Reset		✓	
A Done	address			Internet	>	

9) Successful message will show and click new IP Address to continuous setting.



NOTE:

- skip from here on if new IP address is in same subnet of previous one Go the Start => settings => control panel => network connections.
- 2) Selection connection which connect to the reader.
- 3) Press properties
- 4) Select Internet Protocol(TCP/IP) and press properties
- 5) change the IP address which in the same domain with reader.

Internet Protocol (TCP/IP) Properties	Internet Protocol (TCP/IP) Properties	
General	General	
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	
Obtain an IP address automatically	Obtain an IP address automatically	
O Use the following IP address:	● Use the following IP address:	
IP address: 192 . 168 . 1 . 100	IP address: 192 . 168 . 11 . 100	
Subnet mask: 255 . 255 . 0	Subnet mask: 255 . 255 . 0	
Default gateway:	Default gateway:	
Obtain DNS server address automatically	Obtain DNS server address automatically	
Use the following DNS server addresses:	Use the following DNS server addresses:	
Preferred DNS server:	Preferred DNS server:	
Alternate DNS server:	Alternate DNS server:	
Advanced	Advanced	
OK Cancel	OK Cancel	

- 6) Press OK to close all the dialog.
- 7) Open Internet Explorer and type in the new IP address in the address field and press Enter

WLAN Gateway Module WIZ610wi - Microsoft Internet Explorer	
File Edit View Favorites Tools Help	ada 🛛 🥂
🌀 Back 🔻 🕤 🝸 📓 🏠 🔎 Search 👷 Favorites 🤬 😥 - 💺	🖻 • 📴 🎽
Address 🝘 http://192.168.11.123/home.asp	🖌 Links 🎽



- 8) Select Wireless Setting on the left column. Operation Mode will show
- 9) Select **Client** and press Setup. It takes a moment applying the setting and Client Mode Setting will show.
- 10) Enter the SSID name in of your wireless network and press Apply Changes.



- 11) Press Security Setup. A Wireless Security Setup dialog will show.
- 12) Select your network authentication and Select/Enter according information. Press Apply Change.

http://192.168.11.123 - Wireless Se	curity Setup - Microsoft Internet Explorer	
Wireless Security Setu	ıp	
Authentication: WPA2-PSK Encryption: TKIP_AES 💌	▼	
Pre-Shared Key Format:	Passphrase 💌	
Pre-Shared Key:	123456789	
Apply Changes Reset		



13) It takes a moment applying setting.

http://192.168.11.123 - OK - Micro	soft Internet Explorer	
Please wait a moment to l	et the new settings take effect	
Please wait		

- 14) After loading the setting. Close the entire dialog.
- 15) All setting complete.



1.5 Wireless Connection Configuration Guide

1.5.1 Briefly description

- Status	
 <u>Sγstem</u> 	< check the system status and reader configuration
Active Clients	<check active="" all="" client="" status<="" th="" the=""></check>
Network Setting	< setting network config. e.g. IP address, subnet Mask, etc.
🖃 <u>Wireless Setting</u>	< setting the operation mode and the wireless connection
Security	< setting the wireless connection security
 Others 	
Region Settings	< select the country code
Password	< charge password
🖃 Log	< for user setup/check the log file of the reader
Upgrade	< upgrade the firmware
Factory Default	< to reset all setting to factory default setting
Reboot	< reboot the reader



1.5.2 Status-system

It shows all the system information: firmware version, LAN configuration, WLAN configuration, Serial configuration.

	HONG 🕷 Kong 🕷	RFID		
Status		System Data		<u>^</u>
System Active Clients Network Setting Wireless Setting Security	This page shows the current status and some basic settings of the device.	<mark>System</mark> Firmware Version: Firmware Date:	WIZ610wi_v1.1.5 2009/11/30 15:37:36	
) others = Region Settings = Password = Log = Upgrade = Factory Default = Reboot		LAN Configuration MAC Address: IP Address: Network Mask: Default Gateway: DHCP Server: DHCP Start IP Address: DHCP Finish IP Address:	00:08: DC:15:4A-24 192.168.11.123 255.255.255.0 0.0.0.0 OFF 192.168.1.2 192.168.1.100	
		WLAN Configuration MAC Address: SSID: Channel: Status: Serial Configuration	00:08:DC:15:4A:23 HKRFID5 11 Connected	
Dope		Status: Protocol:	Enable TCP	Internet

1.5.3 Status-Active Client

In this page, the information of clients connecting to WIZ610wi is displayed. If you click "Refresh" button, the client list and information are updated.

Address Addres		RFID						
 Status System 		Active Wirele	ss Clie	ent Table				
Active Clients Network Setting Wireless Setting Security Others Region Settings Password Log Upgrade Factory Default Reboot	This table shows the MAC address, transmission, reception packet counters for each associated wireless client.	MAC Address 00:1e:c1:4c:4d:99 Refresh	Chan 11	Tx Rate (Mbps) 48M	RSSI 42	Tx Packet 1368	Rx Packet 11568	



1.5.4 Network Setting

For user change the network setting of the reader.

A WI AN Gateway Modu	le WIZ610wi - Microsoft	Internet Evolutor	
i File Edit View Favoriti	es Tools Help	internet explorer	
🔇 Back 🔹 🌍 🕤 🖹	👔 🏠 🔎 Search 👷 Favo	rites 🙆 🙆 - 🍃 📑 - 🍺 🍳	2
Address 🙋 http://192.168.	11.123/home.asp		
	HONG : KONG :	RFID	
 Status System Active Clients Network Setting Security Others Region Settings Password Log Upgrade Factory Default Reboot 	This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHOP, etc	LAN Interface S IP Address: Subnet Mask: Default Gateway: DHCP: DHCP Client Range: DNS Server1: DNS Server2: Apply Changes	etup 192.168.11.123 255.255.255.0 0.0.0 Disabled ♥ 192.168.1.2 ● 192.168.1,100 Show Client Reset

Name	function
IP Address	Set the IP address to the reader
Subnet Mask	Set your network subnet mask to the reader
Default Gateway	Set the your network gateway to the reader
DHCP:	When the reader set as a server, you can set the reader activate the DHCP function.
DHCP Client Range	When the reader set as a server and DHCP function is on, user should set a range of IP address to the client for connection.
Show Client	To show the list of connected Clients



1.5.5 Wireless Setting

It selects the operation mode of the reader and the setup the selected mode

	HONG KONG			
• Status		Operation Mode		
 Network Setting Wireless Setting Security Others Region Settings Password 	This page is used to setup different operation mode.	○ Access Point:	Setup	In this mode, all ethernet ports and wireless interface are bridged together and NAT function is disabled. All the WAN related function and firewal are not supported. The wireless mode is AP mode
 Log Upgrade Factory Default Reboot 		⊖ Gateway:	Setup	In this mode, the device is supposed to connect to internet via ADSL/Cable Modem. The NAT is enabled and PCs in LAN ports share the same IP to ISP through WAN port. The connection type can be setup in WAN page by using PPPOE, DHCP client, PPTP client or static IP.
		⊙ Client	Setup	Client-Infrastructure.

Mode	Function
Access Point	In this mode, all ethernet ports and wireless interface are bridged together and NAT function is disabled. All the WAN related function and firewall are not supported. The wireless mode is AP mode.
Gateway	In this mode, the device is supposed to connect to internet via ADSL/Cable Modem. The NAT is enabled and PCs in LAN ports share the same IP to ISP through WAN port. The connection type can be setup in WAN page by using PPPOE, DHCP client, PPTP client or static IP.
Client	Client-Infrastructure.



1.5.6 Access Point Setup

After selecting the AP mode and please click "Setup" button,

	HONG %	RFID		
 Status <u>Network Setting</u> 		AP Mode Settin	gs	
 <u>Network Setting</u> <u>Wireless Setting</u> <u>Security</u> Others 	This page is used to setup different operation mode.	Alias Name: Band: SSID: Channel Number: Mode: WDS-Mode: Security: Advanced Settings: Access Control: WDS Setting: DDNS: Apply Changes	Wireless_AP 802.11 (B+G) ♥ HKRFID5 1 ♥ Slave ♥ Setup Setup Setup Setup Setup Setup Setup	

Name	Function
Alias Name:	Type in the reader name
Band	Select communication protocol
SSID	Input SSID for wireless communication.
Channel Number:	Select the channel frequency which you will use for wireless communication.
Mode:	Select the mode of the AP : set reader operates as Access Point. AP+WDS : WDS(Wireless Distribution System) repeater, this mode can let the reader communication each other. In this mode, the reader will also operate with AP mode in the same time.
WDS-Mode:	Select the master/ salve when WDS is set
Security:	Setting the wireless connection security
Advanced Settings:	Have a more advanced setting : Fragment Threshold, RTS Threshold,Preamble Type, Beacon Interval

🗿 http://192.168.11.123 - Wirel	ess Advanced Setting - Microsoft Internet Explorer
Wireless Advance	d Settings
Fragment Threshold:	2346 (256-2346)
RTS Threshold:	2346 (0-2346)
Preamble Type:	Long Preamble O Short Preamble
Data Rate:	Auto 💌
Tx Power Level:	14 (802.11b: 0-16dBm, 802.11b+g and 802.11g: 0-14dBm)
Beacon Interval:	100 (20-1024 ms)
Inactivity Time:	300 (300-60000 sec)
Broadcast SSID:	• Enabled O Disabled
WMM:	• Enabled O Disabled
Apply Changes	Reset
Fragment Threshold:	This value specifies the maximum size for a
Fragment Threshold: ' acket before data is fragmentation Threshold' ragmentation Threshold' w may result in poor the default value is ragins default value of 2 (TS Threshold: When inor reduction of the	This value specifies the maximum size for a ragmented into multiple packets. If you set error rate, you may slightly increase the old. Setting the Fragmentation Threshold too retwork performance. Only minor reduction recommended. In most cases, it should remain 2346.
gment Threshold: ' tet before data is fr erience a high pack mentation Thresho may result in poor le default value is r s default value of 2 S Threshold: When or reduction of the york packet is smal /CTS mechanism cular receiving of r to Send right to b ?	This value specifies the maximum size for a ragmented into multiple packets. If you tet error rate, you may slightly increase the old. Setting the Fragmentation Threshold too rnetwork performance. Only minor reduction recommended. In most cases, it should remain 2346. In you encounter inconsistent data flow, only default value, 2347, is recommended. If a ller than the preset RTS threshold size, the will not be enabled. The Router frames to a a data frame. After receiving responds with a begin transmission. The as its default value of default value is 100. Enter a value between 1

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Access Control:	Setting the MAC address to allows or blocks clients access
	http://192.168.11.123 - Wireless Access Control - Microsoft Internet Explorer
	Wireless Access Control
	Wireless Access Control Mode: Disable MAC Address: Disable Apply Changes Reset
	Current Access Control List:
	MAC Address Comment Select
	Delete Selected Delete All Reset
	Disable: the wire access control mode Allow Listed: add the MAC address user in to allow mode Deny Listed: add the MAC address client into deny mode
WDS Setting:	If AP mode is set as WDS Repeater, WDS Setting button is activated. WDS is Wireless Distribution System that is working as a wireless bridge between AP and AP.

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	http://192.168.11.123 - WDS Setting - Microsoft Internet Explorer	
	WDS Setting	
	MAC Address: Comment: Apply Changes Reset	
	Current WDS List:	
	MAC Address Comment Select Delete Selected Delete All Reset	
DDNS:	DDNS: Dynamic DNS is a service that provides you with a unchanging, internet domain name (an URL) to go with that address. You can apply one at www.no-ip.com.	valid, IP-



1.5.7 Client Mode Setup

After selecting the Client mode and please click "Setup" button



Name	function	
Alias Name	Type in the reader name	
Band	Select communication protocol	
SSID	Input SSID for wireless communication.	
Security	Setting the wireless connection security	
Advanced Settings	Have a more advanced setting : Fragment Threshold, RTS Threshold, Preamble Type, Beacon Interval	
WAN Port	Setup the WAN Port	
DDNS	DDNS: Dynamic DNS is a service that provides you with a valid, unchanging, internet domain name (an URL) to go with that IP-address. You can apply one at www.no-ip.com.	
Site Survey	Look for the available wireless network	
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1.5.8 Security

Setting the wireless connection security.

	HONG %	RFID
 Status System Active Clients Network Setting Wireless Setting Security Others Region Settings Password Log Upgrade Factory Default Reboot 	Wireless Security	Wireless Security Setup Authentication: WPA-PSK Encryption: TK Open System Shared Key Pre-Shared Key: Apply Changes Reset

Authentication	Select the authentication of the network to connect
	the four selection:
	-Open system
	-Shared key
	-WPA-PSK
	-WPA2-PSK
Encryption:	Select the encryption of the network to connect
	the two selection:
	-TKIP_AES
	-WEP

The encryption is TKIP_AES

Encryption:	TKIP AES
Pre-Shared Key Format:	Select the key format
Pre-Shared Key:	Enter the Key



 Status System Active Clients Network Setting Wireless Setting Security Others 	Wireless Security	Wireless Security Setup Authentication: WPA-PSK Encryption: TKIP_AES Pre-Shared Key Format: Hex (64 characters)	
Region Settings Password Log Upgrade Factory Default Reboot		Pre-Shared Key: ************************************	

The encryption is WEP

Encryption:	WEP
Voy Longth:	Select the key length :
Key Lengui.	64-bit or 128-bit
Voy Format.	Select the key format:
Key Format.	ASCII (5 characters) or Hex (10 characters)
Default Tx Key:	Selection the Default Key
Encryption Key 1:	Enter the key
Encryption Key 2:	Enter the key (if any)
Encryption Key 3:	Enter the key (if any)
Encryption Key 4:	Enter the key (if any)



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1.5.9 Others

Region Settings:

- select the country code

 Status Network Setting 	Country Code Settings
 Wireless Setting Security Others Region Settings Password Log Upgrade Factory Default Reboot 	Contry Code: France: (1~13) ✓ Apply Changes Default: (1~11) Canada ,USA : (1~11) France: (1~13) Japan: (1~14)

Password

- for user to change the password(strongly recommended to set your user password for security issue.)

-		HONG KONG	RFID
1	 Status System Active Clients Network Setting Wireless Setting Security Others Others Region Settings Password Log Upgrade Factory Default Reboot 	For the administrator's first time login, it is strongly recommended to set your user password for security issue.	New Password: Confirmed Password: Apply Change Reset



Log

- For the administrator's to setup the log function and check system log file.

	HONG S	RFID
 Status Network Setting Wireless Setting Security Others Region Settings Password Log Upgrade Factory Default Reboot 	For the administrator's to check system log file.	System Log ✓ Enable Log ✓ System all Wireless only DDNS only Wireless only Dday 00:08:13 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:20 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:23 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:23 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) (bday 00:08:24 WIZ610wi syslog.warn klogd: wifi0: stuck beacon: resetting (b
		Oday 00:08:46 WIZ610wi syslog, warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) Oday 00:08:46 WIZ610wi syslog, warn klogd: wifi0: stuck beacon: resetting (bmiss count 8) Oday 00:10:34 WIZ610wi syslog, info klogd: br0: port 2(ath0) entering disabled state Oday 00:10:35 WIZ610wi syslog, info klogd: br0: port 1(ath0) entering disabled state Oday 00:10:35 WIZ610wi syslog, info klogd: br0: port 1(eth0) entering disabled state Oday 00:10:35 WIZ610wi syslog, info klogd: device eth0 left promiscuous mode Oday 00:10:35 WIZ610wi syslog, info klogd: br0: port 1(eth0) entering disabled state Oday 00:10:35 WIZ610wi syslog, info klogd: device eth0 left promiscuous mode Oday 00:10:36 WIZ610wi syslog, warn klogd: Invalid PHY ID1 for enet0 port0. Expected 0x0243, read 0xffff

Upgrade

- for user to upgrade the firmware of the reader.

	HONG 🖁	RFID		
 Status System Active Clients Network Setting Wireless Setting Security Others Region Settings Password Log Uporade Factory Default Reboot 	Please have the new firmware image prepared. It takes a moment to save the new image and reboot automatically.	Upgrade Firmwa Select File: Upload Reset	are	Brows



Factory Default

- to reset all setting to factory default setting

	HONG KONG	RFID
Status Status Active Clients Active	Factory Default and Warm Reboot	Factory Default Factory Default

Reboot

- to reboot the reader

	HONG % KONG %	RFID
Status System Active Clients Network Setting Wireless Setting Security Others Region Settings Password Log Ungrade Factory Default Reboot	Anytime you want to warn boot this device for any purposes.	Reboot System Reboot



1.6 Computer Software Installation

INSTALLATION STEPS

- 1) install the window .net framework 3.5
- 2) install the Xtractor Package
- 3) start the software

PROCEDURE

- 1) Install the window .net framework 3.5(if you already install before, ignore this part).
 - i. Double click the "WindowsInstaller-KB893803-v2-x86.exe" on the CD to process the installation
- 2) Install the Xtractor Package
 - i. extract the file "Xtractor Package.zip" on the CD(you need a unzip software)
 - ii. double click the "Installer.msi"to instal the Xtractor Package.

3) Start up the software

i)double click "Demo_HKRRAR-EM.exe" to start the software.



1.7 Demo Software User Guide

INSTALLATION STEPS

- 1) input the IP address of the reader in the IP field
- 2) input the port number of the reader(default is 5000)
- 3) press connect until the state bar show connected
- 4) press start read to receive tag information. And the state bar show the no. of tag received.
- 5) Press stop when you finish read the tag
- you may clear the result window by clicking Clear Result and re-read the tag information
- 7) press disconnect to disconnect the reader

🔜 HKRAR-EM Demo					
Reader Model No: HKRAR-EM					
IP:	192.168.11.123				
Port:	5000				
	Connect	Disconnect			
	Start Read	Stop Read			

🖶 HKR/	AR-EM Demo				
Reader	Model No: HKRAR-EM	Tag ID	Read Count	Last Read Time	
		43000000004986	2	2010-04-30 15:14:27	
IP:	192.168.11.123	43000000000933	2	2010-04-30 15:14:27	
	-	43000000000935	2	2010-04-30 15:14:27	
Port:	5000	43000000004988	2	2010-04-30 15:14:27	
		43000000000930	2	2010-04-30 15:14:27	
		43000000004990	2	2010-04-30 15:14:27	
	Start Read Stop Read	43000000004984	2	2010-04-30 15:14:27	
		494E 47450000B 800	1	2010-04-30 15:14:27	
		494E 47450000B 700	1	2010-04-30 15:14:28	
		430000000004968	2	2010-04-30 15:14:28	
		43000000000936	2	2010-04-30 15:14:28	
		43000000000937	2	2010-04-30 15:14:28	
		494E47450000C600	1	2010-04-30 15:14:28	
		430000000004969	2	2010-04-30 15:14:28	
		430000000004963	2	2010-04-30 15:14:28	
		494E47450000C400	1	2010-04-30 15:14:28	
		430000000004991	1	2010-04-30 15:14:28	
	Clear Result				
o. of Ta	gs: 16				

FCC WARNING

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 must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

NOTE 1: This equipment 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 radiate 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.

NOTE 2: Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

NOTE 3: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.