URkit UR Series Utility tool

Development kit for UR series reader

INTRODUCTION

URkit is the Utility tool for UR series reader. With its software(URkit Configure), URkit may perform complete functionalities of UR series reader.

With URkit's configuring software, the user may set up transferring baud rate and output interface; as well as set up the output data size, format, and type.

URkit is the best tool to customize the reader spec. for different customers.

UR Series is a stylish, reliable proximity RFID reader with piano finish housing which really shows seamless integration to an intelligent building. For those high end projects, UR fulfils its requirement in both excellent performance and flexible appearance, such as changeable housing with customized logo, LED colors or even the buzzer sound which are all configurable to meet wide range of applications in Access control area or Home automation area. With waterproof design, it also serves as a great outdoor reader in all environment.

FEATURES

- USB Human Interface Device. •
- Input DC+5V form USB Port and Provide DC+9.5 V.
- You can set UR Serise to various formats .
- Supported baudrate: 2400bps to 115200bps
- LED to show communication Status.
- It's able to test 2-set Digital Input and 2-set Digital Output. •
- Supported test interface: Wiegand, TK2 and RS232
- Win98/ME/2000/XP/Vista 32bit/Win 7(32/64-bit)compatible

SPECIFICATIONS

OPFRATING

•••••••••••••••••••••••••••••••••••••••	
Function	Configure Kit for UR series reader
ELECTRICAL	
Power Input	5 VDC. Linear supply recommended.
Standby Current	50mA @5VDC
Operating Current	180mA @5VDC(Connector with UR110-00) 270mA @5VDC(Connector with UR220-00)
Power Output	9.5 VDC
MECHANICAL	
Dimensions	Length : 52 mm / Width : 35 mm / Height : 18 mm for URkit.
Weight	22 gm (Without Cable)
ENVIRONMENTAL	
Temperature	Operating : 0 °C to 55 °C Storage : -10 °C to 65 °C
Humidity	Operating : 10 % to 90 % noncondensing Storage : Up to 90% noncondensing

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ion 110	

URkit-00

TERMINAL / INDICATOR DESCRIPTIONS





Green	Red	Yellow	Description
Off	Off	On	Standby
Blink	Blink	Blink	
Off	Off	Off	

2 Reset Button

3 10 Pin Terminal for URxxO Series

Pin	Color	Signal	In/Out	Description
1	Red	VCC	Р	Power 7.5-12 Volts
2	Black	GND	Р	Power Ground
3	Gray	D/O 1	0	Digital output 1 (open drain)
4	Blue	D/O 2	0	Digital output 2 (open drain)
5	Groop	ту	1/0	RS232 TX (transmit), Magstripe
J	Green		1/0	Data & Wiegand Data 0
6	W/bito	DY	1/0	RS232 RX (receive), Magstripe
0			1/0	Clock & Wiegand Data 1
7	Orange	CP	I/O	Card Present Output
8	Brown	D/I 1		Digital input 1 (active high)
9	Purple	D/I 2		Digital input 2 (active high)
10	Yellow	SEL	I/O	Program In/out

CONNECTION FOR UR110/220 Series



CONNECTION FOR UR110U/220U Series



WAS-1487	

Please have two USB port in your computer. Connect URkit to one USB port as a key to acceess the software. Connect UR reader to another USB port and run software for configuration. Please don't remove URKit before you finish the configuration with UR reader.

I SOFTWARE

Connect UR Series to URkit with PC through USB port , then run the demo software "UR Kit configure".

(You can find the software in URKit Configure)

USB HID Scan

Select " Auto " and click "Scan" to communicate URkit with PC.If the communication is successful, it will show "Found URkit" and jump UR Device.

UR Device

- Device Information:
- •Include interface, device name, firmare version

General:

- •Baudrate (2400/4800/9600/14400/19200bps) Choose the Baudrate to UR Series.
- •Buzzer (On/Off)
- •Check Method (None/Sum/BCC) Choose the Checksum mode.
- •DI Mode (High→Low/Low→High) This function is only available for URXXX-20(RS485).
- •DO1/DO2 Timer (3~254sec) Set the retentive time for Digital output.
- •Duplicate LED (Off/Green/Red/Blue/Yellow/Cyan/Purple/White) Set the duplicate led color for Device.
- •Duplicate Timer (Disable/0~254sec) Set the duplicate time for Device.
- •Machine ID(1~255) This function is only available for URXXX-20(RS485).
- •Output Interface (Wiegand/Magnetic/RS232/RX Line Select) Set the Interface for Device.
- •Read Event LED (Off/Green/Red/Blue/Yellow/Cyan/Purple/White) Set the LED of Read the card displays the color.
- •Reader Mode(Immediate/Non-Real-Time) This function is only available for URXXX-20(RS485).
- •Scan Mode(Once/Continue) This function is only available for URXXX-20(RS485).
- •Standby LED (Off/Green/Red/Blue/Yellow/Cyan/Purple/White) Set the LED when device is standby.
- •UID Order(MSB First/LSB First) Choose the Significant Bit display mode.
- ID Filter-Input/Output:
- •Set the Format ,Start bit ,Length.



Magnetic:

•Magnetic Encode(7-bits / JISII / ABA TK2)

- Magnetic ES(Set End Sentinel)
- •Magnetic SS(Set Star Sentinel)
- Magnetic Zeros Leading Zeros
- Magnetic Zeros Trailing Zeros
- •Swipe Card Speed(6~524ips)

RS232(UART):

- •Delimiter(CR / LF / TAB / CR+LF)
- •Frame End
- Frame Start
- Output Card Type(Show Card Type)
- •Output Format(Choose Hexadecimal or Decimal)
- Package OnRemove
- Package Postfix
- Package Prefix

Wiegand:

- Number(3~66bits)
- Parity ES(Set Parity for End Sentinel)
- Parity SS(Set Parity for Star Sentinel)
- Pulse Interval(6~4802us)
- •Pulse Width(6~1213us)
- •Wiegand Output format

(Choose Hexadecimal or Decimal)

•Open:

If you want to load the settings form the file to URkit, click [Open] to open the file

and then click [Write] to load the settings to URkit. Save:

Click [Save] if you want to save the current settings of URkit.

•Read:

Click [Read] if you want to know the current settings of URkit. The settings will be gotten and shown in the software window.

•Write:

Click [Write] to load the settings to URkit.

•Test:

If you want to test output data for Device,Click [Test] to test mode. Read the card and Information will appear in the grid.

Interface Included MSR ,UART ,Wiegand.

RS485 function is only available for URXXX-20.

UR Device	UR D	UR Kit		
			21 21 💷	
			Device Information	
	1	COM1	Connect To	
		UR110	Device Name	
Onen		ROM-T1149	Firmware Identity Number	
= Open	-	¥1.02R0	Finnware Version	
			🗉 General	
Save		19200 bps	Bandrate	
		On	Buzzer	
Read	1.0	None	Check Method	
		5	DO1 Timer	
Write		5	DO2 Timer	
		Red	Duplicate LED	
Test		(Disable)	Duplicate Timer	
L		RX Line Select	Output Interface	
		110	Read Event LED	
		Once	Scan Mode	
		Green	Standby LED	
			🗉 ID Filter - Input	
COM Po		16H	🗄 All Cards ID Input	
- HID1			🗄 ID Filter - Output	
		• • • • •	All Cords ID Issued	
Scan			All Cards ID Input Filter	
			ou caus to input liket	
Exit				

4/24 13:34:	47,959 Receive dat	a from HID1		
nterface [U Receive Dat	JRKit = UART, Devid	ce = RX Line Select	:]	
STX>010B0BE	F18 <cr><lf><etx></etx></lf></cr>			
IDV:1				
URKit Interface Su	itch	■ Wieczand	© PC/85	
URKit Interface Sw	vith	© Wiegand	© RS485	

Digtal Input/Ootput Test



Check DI 0 functions, Role will light.

UR Kit LED Control:

- •Led Control of the URkit.
 - (On/ Off/ Blank/ Device control)

UR Kit Output Power Control:

Power On(Turn on Pin1 to Provides DC+9V)



- How to modify the output data format?1. Select the card type you need (for example Mifare 1K) and then click the right button to configure output format.

2. Set up the start bit and length of data from "Card ID Filter Options" (see below image and example).

R Device	UF	UR Kit		
			21 21 1	
		Red	Duplicate LED	
		(Disable)	Duplicate Timer	
		RX Line Select	Output Interface	
0		Off	Read Event LED	
0		Green	Standby LED	
	1	MSB First	UID Order	
Sa			🗊 ID Filter - Input	
		16H	∃ All Cards ID Input	
Re			ID Filter - Output	
		14D, 10H	■ EM 125K	
W		20D, 16H	∃ Felica	
		10D, 8H	Mifare 1K	
Ti		10D, 8H	∓ Mifare 4K	
		18D, 14H		
			Magnetic	
		ABA TK2	Magnetic Encode	
		015 - ?	Magnetic ES	
		011 - ;	Magnetic SS	
COM		10	Magnetic Zeros Leading Zeros	
+ HID1		10	Magnetic Zeros Trailing Zeros	
Se		30.ING	Mifare 1K Mifare 1K ID Filters	
E				

UR Kit Configure V1.2R6		🚯 UR Kit Configure Test	
Card ID Filter Ontions		06/15 13:52:40.165 Receive data from HID1	
Output Hexadecimal		[Receive Data]	
Standb: Format 5H		COIADH/DAGCEIAD	
B ID Fil Start 4 12 Length 51			
⊞ EM12: □ Felica 12 45678			
E Mifare 12/[45678]			
Magnet TOD 10			
Magnet Start 1 Length 10			
Magnet 1234567890			
B 8223		URKit Interface Switch	
D Filter OK Cancel		© MSR	
		Auto Test Clear	Cancel
Connected to UR device			
🗞 UR Kit Configure V1.2R6		🗞 UR Kit Configure Test	
Card ID Filter Ontions		06/15 17:28:56.708 Receive data from HID1	
		Interface [URKit = UART, Device = RX Line Select] [Receive Data]	
Outpu Format 8H		<stx>A67B4AEE<cr><lf><etx></etx></lf></cr></stx>	
UDO Start 10 Length 84		(Unknown)	
BIDFA BEM 12 12345678			
Felica [12345678] Mifare	F		
Matare Decimal			
Haga Format 10D			
Magav Start 1 Classification 10			
Magoz 0 1 Magoz 1234567890			
Swipe 1234567890		URKit Interface Switch	
ID File OK Cancel		⊙ MSR	
		Auto Test Clear	Cancel
Connected to UR device			
Connected to on device			
🚯 UR Kit Configure V1.2R6		🍫 UR Kit Configure Test	
Card TD Tiller Octions		06/15 17:33:18.239 Receive data from HID1 Interface (URKit = UARI, Device = RX Line Select)	
ard ID Hiter Options		[Receive Data] (STX>A67B4AE<(R> <lf><etx></etx></lf>	
Read B Format User Define			
BID Fal Start 1 Start 1 Start			
BID F1 0 B BM 12 1234567			
H Felica 11234567			
Matae Decimal			
Magar Format 10D			
Mage Start 1 Length 10 -			
Magne 10 1			
Swipe 1234567890		URKit Interface Switch	
		© MSK	
UK Cancel		Auto Test Clear	Cancel
EAR *			
Connected to UR device			



CAUTION:

The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream.

To prevent possible harm to the environment or human health please separate this product from other waste streams to en-sure that it can be recycled in an environmentally sound manner.

For more details on available collection facilities please contact your local government office or the retailer where you purchased this product.

This information only applies to customers in the European Union.

For other countries, please contact your local government to investigate the possibility of recycling your product.