

USER MANUAL

SecuRED Encrypted Magstripe Reader JPOS Reference Guide Windows

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Revision History

Revision	Date	Description	By
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	Introduction

1. Introduction

This document provides information for using JPOS Service Object (SO) for MSR readers.

2. System Requirements

This JPOS Service Object is for Windows XP, Windows Vista, Windows 7 and Windows 8.

3. Reference Document

- 1. Unified POS Retail Peripheral Architecture Version 1.13.1
- 2. International Standard for Implementation of Point Of Service Peripherals

4. Environment Build

Install Sun JRE 1.5 or JDK 5.0, JRE 6 or JDK 6, JRE 7 or JDK 7:

Download the newest JRE 1.5 installation package from: http://java.sun.com/j2se/1.5.0/download.jsp, then click: Download JDK 5.0 Update and select a proper platform JDK version to download. Install the package and make sure the "java" command functions properly. There may be a need to add the JRE bin directory into the system environments variables by following steps:

For Microsoft Windows XP

- 1. Right click "My Computer" in the desktop
- 2. Select the "properties" menu item
- 3. Select "Advanced" tab
- 4. Click button "Environment Variables"
- 5. Select "Path" and insert the JRE bin directory.

When Java is working, following can be observed:

🛋 Command Prompt



- 🗆 ×

Enter DOS command shell, and enter java. It shows information about how to use.

FILELISTS:

🔺 🗁 dest
🛃 jmsrso.jar
🛛 🗁 ext
🗟 com_securemsr_connector_JNIConnector.dll
🗟 IDTECH_KeyboardHook.dll
🗟 MSRKeyboardHook.dll
🗟 PS2Conn.dll
🗟 usbhidConn.dll
🗟 usbkbConnector.dll
🔺 🗁 help
👜 User Manual -IDTECH MSR - JPOS Service Object.doc
🔺 🗁 lib
🛃 jpos113.jar
🛃 xerces.jar
🔺 🗁 POStest
🔺 🗁 jpos
🔺 🗁 res
jpos.properties
🗋 jpos.xml
POStest.bat
🛃 POStest.jar

jmsrso.jar - JPOS device service control for MSR

jpos.xml - jpos configure file

jpos.properties - jpos configure file, this specifies jpos.xml

com_securemsr_connector_JNIConnector.dll - JNI DLL

usbkbConnector.dll - extension DLL

kbhidConn.dll - wrap DLL to usbhid and kbhid

usbhidConn.dll - extension DLL to access usbhid

MSRKeyboardHook.dll - extension DLL

The .DLL should be located in the directory in the PATH environment specified. For example, if the current working directory is included in the PATH variable,

PATH=%PATH%;.\

So, the DLLs can be moved to current directory.

Device Name: the jpos.xml the JPOS register file, which specify the device names.

There are several entries in this file, with entry name:

"defaultMSR"
"IDTECHSECURED_USBHID"
"IDTECHSECUREMAG_USBHID"
"IDTECHSECUREMAG_USBKB"
"IDTECHMINIMAG_USBHID
"IDTECHMINIMAG_USBKB"

"IDTECHVALUEMAG_USBHID" "IDTECHVALUEMAG_USBKB" "IDTECHMSR_PS2KB" "IDTECHMSR_RS232" "IDTECHMSR_USBCDC"

"defaultMSR"

The entry is a copy of one of other entry as the default name for POSTest program.

"IDTECHSECURED_USBHID",

The line: <prop name="connector" type="String" value=" usbhid/0acd/2810 "/> specifies the connector driver name, and the configuration value. 0acd is IDTECH Vendor ID; 2810 is the product IDs

jpos/res/jpos.properties

This file specify which configure file is used. By default, it specifies the "jpos.xml" as the one. Add jmsrso.jar to your CLASSPATH or specify it in the javac / java command.

set CLASSPATH=%CLASSPATH%;yourDir\jmsrso.jar

For example: jmsrso.jar is placed in c:\so, it should set CLASSPATH=%CLASSPATH%;c:\so\jmsrso.jar

5. Run POSTest

It's the official recommended JPOS compatible test program. The release version includes the program or it can be gotten from <u>http://sourceforge.net/projects/postest/</u>

 Unzip file to a directory. Such as c:\temp
 The Directory is like the following:



Enter "c:\temp"Postest directory under the DOS command shell

C:\WINDOW	WS\System32\ci	nd.exe		 IX
C:\temp>dir Volume in Volume Ser	drive C is vial Number	NEW SYS is AC64-BB]	71	
Directory	of C:∖temp			
03/21/2006 03/21/2006 05/16/2006 05/16/2006 05/16/2006 05/16/2006 05/16/2006	11:06 AM 11:06 AM 11:04 AM 11:04 AM 11:04 AM 11:04 AM 0 File< 6 Dir <s< th=""><th><dir> <dir> <dir> <dir> <dir> <dir> <dir> s> 5,738,1</dir></dir></dir></dir></dir></dir></dir></th><th>dest ext lib POStest Ø bytes 045,440 bytes free</th><th></th></s<>	<dir> <dir> <dir> <dir> <dir> <dir> <dir> s> 5,738,1</dir></dir></dir></dir></dir></dir></dir>	dest ext lib POStest Ø bytes 045,440 bytes free	
C:∖temp>				-

Then enter subdirectory "POStest"

C:\WINDOW	VS\System32	\cmd.exe		 l ×
C:∖temp>dir Volume in Volume Ser	drive C i ial Numbe	s NEW SYS r is AC64-BBI	²1	
Directory	of C:∖tem	p		
03/21/2006	11:06 AM	<dir></dir>		
03/21/2006	11:06 AM	<dir></dir>		
05/16/2006	11:04 AM	<dir></dir>	dest	
05/16/2006	11:04 AM	<dir></dir>	ext	
05/16/2006	11:04 AM	<dir></dir>	lib	
05/16/2006	11:04 AM	<dir></dir>	POStest	
	Ø Fil	e(s)	0 bytes	
	6 Dir	(s) 5,738,0	145,440 bytes free	
C:∖temp>cd	postest			
C:\temp\POS	test>			-

2. To run POSTest just like following:

🔤 C:\WINDOWS\System32\cmd.exe	. 🗆 🗙
C:\temp>cd postest	
C. tame POStect div	
Unlume in dvive C is NEW SYS	
Volume Serial Number is AC64-BBF1	
Directory of C:\temp\POStest	
05/19/2006 08:53 AM <dir> .</dir>	
05/19/2006 08:53 AM <dir></dir>	
05/16/2006 11:04 AM 761 jposps2.xml	
05/16/2006 11:04 AM 799 jposserial.xml	
05/16/2006 11:04 AM 774 jposusbhid.xml	
05/16/2006 11:04 AM 773 jposusbkb.xml	
05/16/2006 01:38 PM 186 POStest.bat	
05/16/2006 11:04 AM 322,874 POStest.jar	
05/16/2006 11:04 HM <dir> jpos</dir>	
05/16/2006 11:04 HM 128 vssver.scc	
05/16/2006 11:04 HM 187 PUStest.Dat.Dat.	
37110(5) 520,482 bytes 2 Div(a) 5 729 045 440 bytes	
5 DIF(\$7 5,758,045,440 Dytes free	
C:\temp\POStest>postest	-

Then a POSTest program screen is shown.

🛓 Javal	POStester in	n Prog	ess								
File											
Remote	OrderDisplay	Scale	Scanner	SignatureCaptur	e SmartCardRV	/ ToneIndic	ator Exit	t			
MSR	PINP	Pad	Poin	tCardRW	POSKeybo	ard	POSP	ower	POSPrinter		
Elec	ctronic Journal		FiscalPrinte	r HardTo	tals Keylo	:k Lin	eDisplay	MICR	MotionSensor		
About	bout Configured Devices Biometrics Bump/Bar CashChanger CashDrawer CA								ner CoinDispenser		
	POSTest The JavaPOS Device Tester. v1.13.1 POStest is a community project under the direction of the JavaPOS working group. Original code donated by 360 Commerce.										
					Contributors:						
			F	Jeff Lange - L Rory K. Shaw - IBM William White - Bracci A. S	Jitimate Technolog "Raleigh RSS Drive IBM/Raleigh Retail istemi Digitali s.r.l.	y Corporation 's and Diagno: Store Solution Pisa (Italy)	stics is				

3. Click "MSR" Tab

🛓 JavaPOStester in P	rogress						
File							
RemoteOrderDisplay Sc	ale Scanner Si	gnatureCapture	SmartCardRV	V ToneIndicat	or Exit		
MSR PINPad	PointCa	rdRW	POSKeybo	pard	POSPower	POSPrinter	
ElectronicJournal	FiscalPrinter	HardTotal	s Keylo	ck LineD	isplay MICR	MotionSensor	
About Configured Devic	es Biometrics	Bump/Bar	CashChanger	CashDrawer	CAT CheckSca	anner CoinDispenser	
Logical name:	defaultMSR			JL	POS_S_CLOSED		
Open	Claim Release	Close	Info St	atistics Fir	mware O/C/E	EXIT	
🗌 Auto disable	MSR Reading Aut	hentication M	SR Writing				
🗌 Data event enabled	Track 1 Data:						
Device enabled	Track 2 Data:						
Freeze events	Track 3 Data:						
🗌 Decode data	Track 4 Data:						
Parse decode data	Track 1 Encrypted D	ata:					
	Track 2 Encrypted D	ata:					
Per-track error reporting	Track 3 Encrypted D	ata:					
Track 1 enabled	Additional Security I	ald:					
Track 2 enabled	Account number:	normation.					
	Expiration date:						
	Title:						
I I rack 4 enabled	First name:						
DeviceAuthenticated	Middle initial:						
Clear Input	Surname:						
Clear Input Properties	Suffix:						
	Service Code:						
	Track 1 discretionar	y data:					
	Track 2 discretional	y data:					
	Data Count:				Clear Fields		

The logical name is the entry name in the jpos.xml file.

4. Click "Open" button, and "Claim", and three "beeps" should sound from the device.

🛓 JavaPOSte	ester i	n Progr	ress											
File														
RemoteOrder	Display	Scale	Scanner	Sign	atureCaptu	re	SmartCa	rdRW	Ton	elndicato	r Exit	7		
MSR	PINP	ad	P	ointCard	RW	γ_	POSK	(eyboa	ard		POSPo	wer		POSPrinter
Electronic	cJournal		FiscalPrin	ter	HardT	otals	; K	eyloc	ĸ	LineDi	splay	MICR		AotionSensor
About Configured Devices Biometrics Bump/Bar				C	ashChang	ier	Cash	Drawer	CAT	CheckScar	nner	CoinDispenser		
Logical name: defaultMSR										JPOS_S	_IDLE			
	Open	Clair	m R	elease	Close		Info	Sta	tistics	Firm	nware	O/C/E	EXI	т
🔲 Auto disable)	MSF	Reading	Auth	entication	MS	R Writing							
🔲 Data event e	enabled	Тгас	:k 1 Data:		0									
📄 Device enab	led	Тгас	:k 2 Data:		0									
📄 Freeze event	ts	Тгас	:k 3 Data:		0									
🖌 Decode data	э	Тгас	:k 4 Data:		0									
✓ Parse decod	de data	Тгас	ck 1 Encry	pted Dat	a: 0									
Transmit sei	ntinels	Тгас	ck 2 Encry	pted Dat	a: 0									
	or roportin	Trac	ck 3 Encry	pted Dat	a: 0		<u> </u>							
Treat 4 and	or reportin	^{ry} Trac	ck 4 Encry	oted Dat	a: 0									
🖌 Track 1 enat	bled	Add	itional Sec	urity Inf	ormation:									
🖌 Track 2 enat	bled	ACC	ount numi	ier:										
🖌 Track 3 enat	bled	Exp	n acion dac 	8:										
🔲 Track 4 enat	bled	Fire	t name:											
DeviceAuthe	enticated	Mide	dle initial:											
Clear Input		Suri	name:											
Clear Input P	roperties	Suff	īx:											
		Sen	/ice Code:											
		Тгас	ck 1 discre	tionary	data:									
		Тгас	ck 2 discre	tionary	data:									
		Data	a Count: O								Clear Fie	elds		

5. Check choices "Data event enabled", "Device enabled"

🛓 JavaPOS	Stester i	n Prog	ress													
File																
RemoteOrd	lerDisplay	Scale	Scanner	Sign	atureCaptu	іге	SmartCa	rdRW	Tonel	ndicator	Exit	7				
MSR	MSR PINPad PointCardRW			7	POSE	(eyboa	nd	7	POSPower POSPrint							
Electro	nicJournal		FiscalPrin	ter	Hardl	otals	; ł	(eylocl	ĸ	LineDis	LineDisplay MICR			MotionSensor		
About	Configured D)evices	rices Biometrics Bump/Bar			1	CashChang	jer 🛛	CashDra	awer	CAT	CheckScar	iner	CoinDispenser		
Logical name: defaultMSR							JPOS_S_IDLE									
	Open	Clai	m R	elease	Close		Info	Stat	tistics	Firms	ware	O/C/E	EXI	т		
🔲 Auto disa	ble	MSI	R Reading	Authe	ntication	MS	SR Writing									
🖌 Data ever	nt enabled	Тга	ck 1 Data:		Γ)										
🖌 Device er	nabled	Tra	ck 2 Data:		()										
📄 Freeze ev	/ents	Tra	ck 3 Data:		ĺ)										
🖌 Decode d	lata	Tra	ck 4 Data:		()										
🖌 Parse de	code data	Tra	ck 1 Encry	oted Data	a: ()										
 Transmit	continole	Tra	ck 2 Encry	oted Data	a: ()										
		Tra	ck 3 Encry	oted Data	a: ()										
	enorreporti	^{ry} Tra	ck 4 Encry	oted Data	a: ()	<u> </u>									
🖌 Track 1 e	nabled	Add	itional Sec	urity Info	ormation:											
🖌 Track 2 e	nabled	Acc	ount numb	er:												
🖌 Track 3 e	nabled	Exp	iration dat	9:												
🔄 Track 4 e	nabled	LICIE	t namo													
🗌 DeviceAu	thenticated	rit S Mide	dle initial													
Clear Inpu	rt	Sur	name:													
Clear Innu	rt Properties	Suff	īx:													
		Ser	vice Code:													
		Tra	ck 1 discre	tionary o	lata:											
		Тга	ck 2 discre	tionary o	lata:											
		Data	a Count: O							(Clear Fie	elds				
								_								

6. Observe the text field and swipe a card.

🛓 JavaPOStester in	n Progr	ess											
File													
RemoteOrderDisplay	Scale	Scanner	Signatu	ireCapti	ure	SmartCa	rdRW	Toneli	ndicator	Exit]		
MSR PINP	ad	Poir	tCardRM	v	γ	POSK	eyboar	d		POSPo	wer	Р	OSPrinter
ElectronicJournal		FiscalPrinte	r (Hard	Fotal s	s K	eylock		LineDisplay		MICR	M	otionSensor
About Configured Devices Biometrics				mp/Bar	[(CashChang	er	CashDra	iwer (CAT	CheckSca	nner	CoinDispenser
Logical nar							J	POS_S	_IDLE				
Open	Clair	n Rele	ease	Close	;	Info	Stati	stics	Firmw	<i>l</i> are	O/C/E	EXIT	
🗌 Auto disable	MSF	Reading	Authent	ication	M	SR Writing							
📄 Data event enabled	Тгас	:k 1 Data:		[9	107BIDT?	7						
🖌 Device enabled	Тгас	:k 2 Data:		-	14	20720123	456789	3					
🔄 Freeze events	Trac	:k 3 Data:		4	14	307B0123	345678	9					
🖌 Decode data	Trac	:k 4 Data:		ĺ	0								
🖌 Parse decode data	Trac	k 1 Encrypte	ed Data:		0								
Transmit sentinels	Trac	k 2 Encrypte	ed Data:		0								
Per-track error reportin	Trac	k 3 Encrypte	ed Data:	(0								
		k 4 Encrypte	ed Data:		0								
	Add	uonai secur	ny morn 	nation:									
✓ Track 2 enabled	Fxni	ration date:	•										
☑ Track 3 enabled	Title	:											
Track 4 enabled	First	name:											
DeviceAuthenticated	Mide	lle initial:											
Clear Input	Surr	name:											
Clear Input Properties	Clear Input Properties Suffix:												
	Sen	/ice Code:											
	Trac	k 1 discretio	onary dat	a:									
	Trac	k 2 discretio	onary dat	a:									
	Data	a Count: O				Clear Fields							

7. Click "Release" or "Close" to release or close the JPOS,

NOTE: This should be done to make sure the device returns to normal state.

8. Click "EXIT" to quit the program.

For more detail please check the http://www.javapos.com and the release help files.

6. A Sample for using MSR JPOS The following the sample: code is import jpos.*; import jpos.config.*; import jpos.config.simple.*; import jpos.loader.*; import jpos.loader.simple.*; import jpos.profile.*; import jpos.services.*; import jpos.util.*; import jpos.util.tracing.*; public class YourClass{ public static void main(String [] args){ MSR msr=new MSR(); /* new an instance */ try{ msr.open(TestConst.testdevicename); }catch(JposException e){ System.err.print(e); } /** Do something here. */ try{ msr.close(); }catch(JposException e){ System.err.print(e); } } }

Important Note:

If the reader has been authenticated, the application should cancel the authentication before close the POS. Otherwise, the reader will stay in the authentication state 120 seconds.