

Star JavaPOS Driver

- *Software Manual* -

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1. Getting Started

Star JavaPOS driver offers full compliance with the JavaPOS Ver. 1.13.

This manual supports the following Star JavaPOS driver packages.

- starjavapos_1.13.x*_windows_32bit.zip
 - starjavapos_1.13.x*_windows_64bit.zip
 - starjavapos_1.13.x*_linux_32bit.zip
 - starjavapos_1.13.x*_linux_64bit.zip
 - starjavapos_1.13.x*_mac.zip
- * x : Version No.

Star JavaPOS driver is an implementation of JavaPOS providing POSPrinter and CashDrawer services for all Star printer products. This software provides a Java class framework through which applications can easily interface with Star printers.

This manual describes the setup procedures, specifications, and limitations of the Star JavaPOS driver, which is used to run Star printers and peripheral devices.

This manual is intended for developers who design application systems that use JavaPOS devices. The manual assumes that the reader is familiar with the following topics.

- General specifications of the JavaPOS 1.13.
- General specifications of the Star POS Printers.
- Java terminology and architecture.
- The host operating system.

◆ This is software of Star Line / StarPRNT emulation exclusive use.

Please check the emulation of the printer before using.

When using a portable printer

◆ Target Model and Firmware Versions

Target Model	Printer F/W
SM-L200	Ver 1.0 or later
SM-L300	Ver 1.0 or later
SM-S230i	Ver 1.0 or later
SM-T300i	Ver 3.0 or later
SM-T400i	Ver 3.0 or later

◆ Simple method of switching over between ESC/POS and StarPRNT emulation modes

< SM-S230i, SM-T300i, SM-T400i >

1. Turn the printer power and open the printer cover.
2. Press and hold the POWER button and the FEED button simultaneously. As soon as the ERROR lamp flashes five times, release the buttons. The emulation switchover takes place automatically.
3. After setting a paper, close the printer cover. The set emulation mode is printed out.
ESC/POS mode: EMU = ESC/POS
StarPRNT mode: EMU = StarPRNT
If the emulation mode is not switched correctly, repeat the above steps 1 to 3.
At that time, in step 2, make sure not to release the buttons until the lamp completes the 5th flash.
4. Please reboot the printer after switching the emulation between StarPRNT and ESC/POS.
*It will be valid after rebooting the printer.

2. Operating Environment

2.1 Operating System

This software supports the following operating systems.

- Windows 11 64-bit (except IoT Enterprise)
- Linux 32-bit and 64-bit*
 - Red Hat Enterprise Linux
 - Ubuntu
- * The latest evaluation environment, please check the readme_en.txt .
Some models are not supported. For details, refer to "2.3 Supported Models".
- macOS 26
- macOS 15
- macOS 14
- macOS 13
- macOS 12

* Limitation for macOS
Please check the readme_en.txt .

2.2 Java Operation Environment

This driver is compatible with Java Runtime Environment (JRE) Ver. 1.8 or later.

On Windows OS, set the PATH variable if you want to be able to conveniently run the JDK executables (javac.exe, java.exe, javadoc.exe, etc.) from any directory without having to type the full path of the command. To set the PATH permanently, add the full path of the following directory to the PATH variable.

<JDK installation directory>\bin

Example: C:\Program Files\Java\jdk1.8.0_202\bin

2.3 Supported Models

The driver supports the operating systems and interfaces listed below.

Models	Linux OS	Windows OS	Mac OS
StarPRNT Thermal Printer			
TSP143IV-UE, TSP143IV-UE SK	USB / Ethernet	USB / Ethernet	USB / Ethernet
TSP143IV-UEWB, TSP143IV-UEWB SK	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}
MCP30	USB / Ethernet	USB / Ethernet	USB / Ethernet
MCP31CBI, MCP31LB, MCP31CB	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}
MCP31CI, MCP31L, MCP31C	USB / Ethernet	USB / Ethernet	USB / Ethernet
MCP20	USB / Ethernet	USB / Ethernet	Ethernet
MCP21LB	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}
MCL32CI	USB / Ethernet	USB / Ethernet	USB / Ethernet
MCL32CBI	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}
MCL21CI, MCL21CI LBL	USB / Ethernet	USB / Ethernet	USB / Ethernet
MCL21CWBI, MCL21CWBI LBL	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}	USB / Ethernet / Bluetooth ^{*1}
POP10, POP10CBI	USB / Bluetooth ^{*1}	USB / Bluetooth ^{*1}	USB / Bluetooth ^{*1}
POP10CI	USB	USB	USB
BSC10II-UE ^{*2}	USB / Ethernet	USB / Ethernet	USB / Ethernet
BSC10II-U ^{*2}	USB	USB	USB

^{*1} The communication of Bluetooth interface is "SPP".

^{*2} This is only available in "Standard Mode". Please check the "Operation Mode" of the self-printing (turn on the power while pressing the Feed button). If you are using a different mode, please contact the seller.

Models	Linux OS	Windows OS	Mac OS
Star Line Thermal Printer			
TSP143IIIU, TSP143IIU ^{*1 *3}	USB	-	-
TSP143IIILAN, TSP143IIIW ^{*1 *3}	Ethernet	-	-
TSP143IIIBI ^{*1 *3}	Bluetooth ^{*2}	-	-
TSP743II	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	USB / Ethernet / Bluetooth ^{*2}
TSP654II	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	USB / Ethernet / Bluetooth ^{*2}
TSP847II	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	USB / Ethernet / Bluetooth ^{*2}
TSP1045, TSP1043	Serial / Parallel / USB / Ethernet	Serial / Parallel / USB / Ethernet	USB / Ethernet
TUP500	Serial / Parallel / USB / Ethernet	Serial / Parallel / USB / Ethernet	USB / Ethernet
TUP900	Serial / Parallel / USB / Ethernet	Serial / Parallel / USB / Ethernet	USB / Ethernet
Star Line Hybrid Printer			
HSP7000	Serial / Parallel / USB / Ethernet	Serial / Parallel / USB / Ethernet	USB / Ethernet
Star Line Dot Printer			
SP700	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	Serial / Parallel / USB / Ethernet / Bluetooth ^{*2}	USB / Ethernet / Bluetooth ^{*2}
StarPRNT Portable Printer			
SM-L200	-	USB ^{*4} / Bluetooth ^{*2}	USB ^{*4} / Bluetooth ^{*2}
SM-L300	-	USB / Bluetooth ^{*2}	USB / Bluetooth ^{*2}
SM-S230i	-	USB	USB
SM-T300i	-	Serial / Bluetooth ^{*2}	Bluetooth ^{*2}
SM-T400i	-	Serial / Bluetooth ^{*2}	Bluetooth ^{*2}
StarPRNT Cash Drawer Control Device			
MCD10UEWB	USB-CDC / Ethernet	USB-CDC / Ethernet	USB-CDC / Ethernet

^{*1} If you use TSP100 Series, you need Xerces-C++ Version 2.7.0 on your Linux system. Please download Xerces-C++ Version 2.7.0 from the package archive homepage of each Linux system. This driver cannot be used when you are using the TSP100 series on a Windows operating system. Please download "TSP100 futurePRNT Software" from Star Micronics download site. For the TSP100 series, the use of JavaPOS drivers is not supported on the Mac OS.

^{*2} The communication of Bluetooth interface is "SPP".

^{*3} The TSP100 series (except for the TSP100IV series) operates with Star Graphic emulation, but is treated as a Star Line Thermal Printer in the Star JavaPOS Driver.

^{*4} USB communication will be supported with firmware version 2.0 or later.

3. Installation

Install the 32-bit or 64-bit driver, whichever is appropriate for your Java runtime environment.

1. Uncompress this package.
2. Files which are existed in unzipped package is able to put on a particular place.

Files : "class libraries(jar file)"

"file of JavaPOS driver settings (jpos.xml)"

"files which are related to test application(java , gif, dll file(Windows), dylib file(Mac))"

* If do not need to put on particular place, be able to place files at same package)

* Library file(dll, dylib) needs to put on a folder which exists test application or a folder which is added path environment.

ex. Particular place :

<Windows>

jar file - "C:\Program Files\JavaPOS\lib"

xml, java, gif, dll - "C:\Program Files\JavaPOS\bin"

<Linux> <Mac>

jar file - "/usr/local/javapos/lib"

xml, java, gif, dylib(Mac) - "/usr/local/javapos/bin"

* If you are using Linux, please refer to "3.1 Linux : Installing StarIO".

On 64-bit operating systems, you can use either the 32-bit or the 64-bit Java runtime environment. Install the appropriate version of the Star JavaPOS driver for your Java runtime environment.

Example :

When using the 32-bit Java runtime environment on a 32-bit OS:	Use the 32-bit driver.
When using the 32-bit Java runtime environment on a 64-bit OS:	Use the 32-bit driver.
When using the 64-bit Java runtime environment on a 64-bit OS:	Use the 64-bit driver.

3.1 Linux : Installing StarIO

Follow the steps below to install StarIO.

1. start a terminal and navigate to the following directory of the unzipped StarJavaPOS Driver package from the terminal.

64-bit: StarIOPort_Install_x64

32-bit: StarIOPort_Install_x32

2. Execute the following commands in order from the terminal

```
chmod +x install.sh
```

```
sudo ./install.sh
```

3. If "Complete!" appears in the terminal, the installation was successful.

Notes

StarIO is installed in the /usr/lib or /usr/lib64 directory.

Please make sure that the above directory is included in the library path when you run the JavaPOS application.

Example of adding an environment variable: \$ export LD_LIBRARY_PATH=/usr/lib64

4. JavaPOS Driver Settings

The Star JavaPOS Driver uses the JCL - Java Configuration Loader system for configuring the provided services. The file jpos.xml contained in this package has been prepared with device entries for Star's printer products.

Refer to the followings and adjust jpos.xml to fit the environment of use.

The following is a setting example of POSPrinter and CashDrawer.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE JposEntries PUBLIC "-//JavaPOS//DTD//EN" "jpos/res/jcl.dtd">
<JposEntries>
  <JposEntry logicalName="POSPrinter_windows_Bluetooth">      ... POSPrinter entry start

    <creation factoryClass="com.starmicronics.starjavapos.ServiceInstanceFactory"
    serviceClass="com.starmicronics.starjavapos.POSPrinterService" />
    <vendor name="Star Micronics" url="www.star-m.jp/eng/index.htm" />
    <jpos category="POSPrinter" version="1.13" />
    <product description="Star receipt printer">
    name="Star Micronics POSPrinter controller"
    url="www.star-m.jp/eng/index.htm" />

    <prop name="model" type="String" value="MCP31" />           ... Model Name Setting (ex. MCP31)      (1)
    <prop name="portName" type="String" value="BT:COM10" />     ... Port Name (Interface to use)      (2)
    <prop name="portSettings" type="String" value="" />         ... Port Settings (Interface settings to use) (3)
    <prop name="ioTimeoutMillis" type="Integer" value="5000" /> ... Timeout Settings                  (4)

  </JposEntry>          ... POSPrinter entry end

  <JposEntry logicalName="CashDrawer_Windows_Bluetooth">

    <creation factoryClass="com.starmicronics.starjavapos.ServiceInstanceFactory"
    serviceClass="com.starmicronics.starjavapos.CashDrawerService" />
    <vendor name="Star Micronics" url="www.star-m.jp/eng/index.htm" />
    <jpos category="CashDrawer" version="1.13" />
    <product description="Printer controlled cash drawer"
    name="Star Micronics cash drawer controller"
    url="www.star-m.jp/eng/index.htm" />

    <prop name="portName" type="String" value="BT:COM10" />
    <prop name="portSettings" type="String" value="" />
    <prop name="capStatus" type="Boolean" value="True" />
    <prop name="signalLevelHighWhenDrawerOpen" type="Boolean" value="True" />

  </JposEntry>
</JposEntries>
```

4.1 Common Settings

Enter the following settings according to the connection method of your device.

■ Model Name Setting ... (1)

ex. `<prop name="model" type="String" value="MCP31" />`

Set the model name according to the printer.

Refer to the table below and enter the strings of the "Model name(value)" field for your model.

Series	Model name (value)	Notes
TSP100IV	TSP100IV, TSP143IV	
TSP100IV SK	TSP100IV, TSP143IV	
mC-Print3	MCP30, MCP31	
mC-Print2	MCP20, MCP21	
mC-Label3	MCL32	
mC-Label2	MCL21	
mPOP	POP10	
BSC10II	BSC10II	
TSP100	TSP100, TSP143 TSP100LAN, TSP143LAN	For TSP100IIU, set the model name to "TSP100."
TSP100III	TSP100, TSP143 TSP143IIILAN, TSP143IIIW TSP143IIIBI	For TSP100IIIU, set the model name to "TSP100."
TSP700II	TSP700II, TSP743II	
TSP650II	TSP650II	
TSP800II	TSP800II, TSP847II	
TSP1000	TSP1000, TSP1045, TSP1043	
TUP500	TUP500, TUP542, TUP592	
TUP900	TUP900, TUP992	
HSP7000	HSP7000	
SP700	SP717, SP747, SP712, SP742	
SM-L200	SM-L200, SM-L204	
SM-L300	SM-L300, SM-L304	
SM-S230i	SM-S230i, SM-S234i	
SM-T300i	SM-T300, SM-T301i	
SM-T400i	SM-T400i, SM-T401i	

Note: You do not have to enter this property on cash drawer devices.

■ Port Name / Port Settings ... (2,3)

ex. <prop name="portName" type="String" value="usbprn:Star MCP31" />
 <prop name="portSettings" type="String" value="" />

Enter the printer's port name and port settings that are appropriate for your operating system and interface.

【 Ethernet 】

- This software uses TCP communication port 9100, TCP communication port 9101, UDP communication port 22222.

[portName]

The port name parameter is formed by combining "TCP:" with your printer's IP address.

For example, if your printer is established on the 192.168.1.102 address then you would pass

"tcp:192.168.1.102"

[portSettings]

The port settings parameter must be an empty string.

[USB - Printer Class]

- Set to "USB Printer Class mode" as follows when you use these models.

-Excluding HSP7000 series

Setting Printer DIP SW1 DIPSW 1-5 = on (Factory Default)

-HSP7000 series

Setting Printer DIP SW1 DIPSW 1-5 = off

[portName]

Two different port name parameter forms are accepted.

1. Do not specify the port name
2. Specifying USB serial number *Windows not supported

The "1." is useful when you are using only one printer and your printer does not have a USB serial number set (which is the default setting). The "2." is useful when you are using multiple printers.

1. Do not specify the port name

<Windows>

The port name parameter is formed by combining "usbprn:" with your printer's Windows printer queue name. For the sample program attached, the printer queue name was created with 1 byte character however, two byte characters also can be used.

For example, when you want to specify a Windows queue name as "Star MCP31", you may create it as:

"usbprn:Star MCP31"

<Linux> <Mac>

The port name parameter is formed by combining "usbprn:" with your printer's model name.

For example, when you want to specify a model name as "MCP31", you may create it as:

"usbprn:MCP31"

2. Specifying USB serial number * Windows not supported.

"usbprn:XXXXXXXX"

"usbprn:" causes StarIO to open the printer with the serial number you've specified.

This is useful in two scenarios:

- To avoid new ports being created when the printer is connected to the computer's different USB ports.
- When you have multiple printers connected simultaneously, your printer can be identified.

Note: Star's printers do not have USB serial numbers configured from the factory default. You will have to write a serial number into the device in order to use this functionality.

[portSettings]

The port settings parameter must be an empty string.

【USB - Vendor Class】

- Set to "USB Vendor Class mode" as follows when you use these models.
 - Excluding HSP7000 series

Setting Printer DIP SW1	DIPSW 1-5 = off
-------------------------	-----------------
 - HSP7000 series

Setting Printer DIP SW1	DIPSW 1-5 = on (Factory Default)
-------------------------	------------------------------------
- Set NSB to "Enable" as follows when you use these models.
 - TSP700II, TSP650II, TSP800II, TSP1000, HSP7000

Setting Printer DIP SW1	DIPSW 1-8 = off
-------------------------	-----------------
 - TUP500

Setting Printer Memory Switch	MSW 7-8 = on
-------------------------------	--------------
 - TUP900

Setting Printer Memory Switch	MSW 7-8 = on (F/W version 4.4 or earlier)
Setting Printer Memory Switch	MSW 7-8 = off (F/W version 5.0 or later)
 - SP700

Setting Printer Memory Switch	MSW 4-7 = on
-------------------------------	--------------
- Install Star Vendor Class USB Driver. * Only Windows
 - ➔ [USBVendorClassDriver Download Site](#)

[portName]

Three different port name parameter forms are accepted.

1. Do not specify the port name
2. Specifying USB serial number ***Mac not supported**
3. Specifying COM port name ***Mac/linux not supported**

The "1." is useful when you are using only one printer and your printer does not have a USB serial number set (which is the default setting). The "2." is useful when you are using multiple printers.

1. Do not specify the port name

"usbven:"

usbven:" instructs StarIO to open the first Star USB Vendor Class device it finds.

When there is no USB serial number set, connecting your printer to different USB ports on the computer will cause it to be assigned varying COM port names - and this would otherwise complicate the use of OpenPort.

2. Specifying USB serial number * Mac not supported.

"usbven:XXXXXXXX"

"usbven:" causes StarIO to open the printer with the serial number you've specified.

This is useful in two scenarios:

- To avoid new ports being created when the printer is connected to the computer's different USB ports.
- When you have multiple printers connected simultaneously, your printer can be identified.

Note: Star's printers do not have USB serial numbers configured from the factory default. You will have to write a serial number into the device in order to use this functionality.

3. Specifying COM port name * Linux/Mac not supported. (Windows only)

"usbven:comX"

"usbven:" causes StarIO to open communications with the printer based on the COM port name it's been natively assigned.

You can determine what name this is by looking in the Windows Device Manager.

Note: If the printer you are using does not have a USB serial number, each time it gets connected to a different USB port it will be assigned a new COM port name. In this case, you need to change the specified COM port name.

[portSettings]

The port settings parameter must be an empty string.

Notes about using USB Printer Class and USB Vendor Class modes (Linux only)

Many Linux operating systems require administrator privileges to use USB devices. If you are logged on as a user without administrator privileges, perform the following configuration, to access a Star USB device.

1. Open the file *49-starusbprn.rules* that is in the JavaPOS driver folder, and enter the user name for the *OWNER* parameter.
2. Place this file in the */etc/udev/rules.d* directory.

Note: 1) You may need administrator privileges to access the directory.
 2) **RHEL** do not support this method for using USB devices.

【 USB-CDC Class】

Connect the device by USB in advance. Also after connecting, make sure that as following.
The checked information will be used to configure portName.

<Windows>

Make sure that is showed the "USB Serial Device (COM X)" (X is number) at "Computer" (right click) > manage > Device Manager > "Ports (COM & LPT)".

<Linux>

At "Terminal", perform the following command.

```
s /dev/ | grep "ttyACM"
/dev/ttyACMX (X is number) (Check the device file)
```

<Mac>

At "Terminal", perform the following command.

```
ls /dev/ | grep "usbmodem"
/dev/tty.usbmodemXXXXXXXXX (X is number) (Check the device file)
```

[portName]

<Windows>

Specifying the "USBCDC: + port number" like "USBCDC:COM18" or "USBCDC:COM19".

The COM port number can be confirmed at Device Manager.

<Linux>

Specifying the port name like "/dev/ttyACMX (X is number)" (X is number).

<Mac>

Specifying the port name like "/dev/tty.usbmodemXXXXXXXXX" (X is number).

[portSettings]

The port settings parameter must be an empty string.

【 Bluetooth 】

Pairing with the printer device in advance. Also after pairing, make sure that as following.

<Windows>

Make sure that is showed the "Standard Serial over Bluetooth link (COM X)"(X is number) at "Computer"(right click) > manage > Device Manager > "Ports (COM & LPT)".

<Linux>

At "Terminal", perform the following command.

hcitool scan (Search a Bluetooth Device, Check a MAC Address of a Bluetooth Device)

As administrator authority, run the following commands.

rfcomm -S bind X <Bluetooth Device MAC Address>

(Create a device file which is "/dev/rfcommX")

chmod u+x /dev/rfcommX

chown <Owner name> /dev/rfcommX

There is the possibility of unintended printing occurring after pairing with the printer.
This is caused by ModemManager. Disable it or take other suitable action.

<Mac>

At "Terminal", perform the following command.

ls /dev/ | grep "tty\."

(Check a device file which is /dev/tty.XXXXXXXX-SPP(XXX is string.))

[portName]

<Windows>

Two different port name parameter forms are accepted.

1. Specifying virtual COM port number

Specifying the COM port number like "BT:COM10" or "BT:COM11".

Refer to above for how to determine a COM port number.

2. Specifying Bluetooth MAC address

Specifying the Bluetooth MAC address like "BT:00:12:f3:1b:d8:04".

The Bluetooth MAC address can be confirmed by self-printing.

<Linux>

Specifying the rfcomm port name like "/dev/rfcommX"(X is number).

<Mac>

Specifying the port name like "/dev/tty.XXXXXXXX-SPP".

[portSettings]

The port settings parameter must be an empty string.

Notes about using Bluetooth (Linux only)

Many Linux operating systems require administrator privileges to use Bluetooth devices. If you are logged on as a user without administrator privileges, perform the following configuration, to access a Star Bluetooth device.

1. Open the file *49-starusbprn.rules* that is in the JavaPOS driver folder, and enter the user name for the *OWNER* parameter.
2. Place this file in the */etc/udev/rules.d* directory.

Note : 1) You may need administrator privileges to access the directory.
 2) RHEL do not support this method for using USB devices.

【 Serial 】**[portName]**

<Windows>

Specifying the serial port name like "COM1" or "COM2".

<Linux>

Specifying the serial port name like "/dev/ttyS0" or "/dev/ttyS1".

[portSettings]

These fields are assembled with 'baudRate', 'parity', 'dataBits', 'stopBits', 'flowControl'.

Each fields are a comma-separated string described with 'baudRate', 'parity', 'dataBits', 'stopBits', 'flowControl'.

<i>For example)</i>	"9600,n,8,1,n"	For desktop printers
	"57600,n,8,1,x"	For portable printers

<Desktop Printers>**Baud rates:**

This field can be one of: "38400", "19200", "9600", "4800".

Parity:

This field can be one of: "n", "e", "o".

n : For none.

e : For even.

o : For odd.

Data bit :

This field is set to "8".

Stop bit :

This field is set to "1".

FlowControl :

This field can be one of: "n" or "e".

n : For no flow control.

h : For hardware flow control.

* It is recommended that you configure your printer for 38400 baud with hardware flow control.

* Do not set ASB function to "Enabled". (Keep default setting "Disabled")

<Portable Printers>

Baud rates:

This field can be one of: "115200", "57600", "38400", "19200", "9600".

Parity:

This field can be one of: "n", "e", "o".

n : For none.

e : For even.

o : For odd.

Data bit :

This field can be one of "7" or "8".

Stop bit :

This field is set to "1".

FlowControl :

This field can be one of: "n", "x" or "c".

n : For no flow control.

x : For software flow control (Xon/Xoff).

c : For hardware flow control.

* Do not set ASB function to "Enabled". (Keep default setting "Disabled")

【 Parallel 】

- Set NSB to "Enable" as follows when you use these models.

-TSP700II, TSP650II, TSP800II, TSP1000, HSP7000

Setting Printer DIP SW1	DIPSW 1-8 = off
-------------------------	-----------------

-TUP500

Setting Printer Memory Switch	MSW 7-8 = on
-------------------------------	--------------

-TUP900

Setting Printer Memory Switch	MSW 7-8 = on (F/W version 4.4 or earlier)
-------------------------------	---

Setting Printer Memory Switch	MSW 7-8 = off (F/W version 5.0 or later)
-------------------------------	--

-SP700

Setting Printer Memory Switch	MSW 4-7 = on
-------------------------------	--------------

[portName]

<Windows>

Specify the parallel port name like "LPT1" or "LPT2".

<Linux>

Specify the parallel port name like "/dev/parport0" or "/dev/parport1".

[portSettings]

The port settings parameter must be an empty string.

■ Communications Timeout Setting ... (4)

ex. <prop name="ioTimeoutMillis" type="Integer" value="5000" />

The value set here establishes a timeout period used to affect communications within this software. If you do not specify this property, its default value (5000 ms) takes effect.

Adjust Communications Timeout Setting depending on your environment and amount of printing data.

4.2 POSPrinter Connection Settings

■ ETB Counter Setting

ex. `<prop name="doCheckedBlockPrinting" type="Boolean" value="True" />`

By setting this property to "True," you can check whether print data is sent properly to the printer. If you do not specify this property, its default value (True) takes effect.

* When a TSP143IIIW and TSP143IIILAN are used, this property is set to "False" regardless of your setting.

■ TSP100 Series Setting (Except TSP100IV series)

ex. `<prop name="commandEmulatorConfig" type="String" value="" />`

Setting for when a TSP100 series (except TSP100IV series) is used.

■ 2-byte Characters Setting

ex. `<prop name="DBCS" type="String" value="SJIS" />`

Setting for when 2-byte characters are used. The following values are available.

SJIS, GB2312, GB18030, Big5, EUC_KR

- Installed fonts vary depending on the model.
- Depending on the printer model that you are using, enable the memory switch's 2-byte character set property.
- If the 2-byte character set is enabled, you cannot change the code page to any character set other than the one that you are using.

■ NV Logo Print Setting

ex. `<prop name="useNVBitImage" type="Boolean" value="True" />`

By setting this property to "True," you can use NV Logo printing by escape sequence (ESC|#B). If you do not specify this property, its default value (False) takes effect.

■ CodePage Setting

ex. `<prop name="codePage" type="Integer" value="437" />`

Setting for when codePage is used. The following values are available.

437,737,852,855,857,858,860,861,862,863,864,865,866,869,874,928,932,998,999,1250,1251,1252

■ ImageBinarizationThreshold Setting

ex. `<prop name="imageBinarizationThreshold" type="Integer" value="128" />`

By adding the above property to jpos.xml, you can change the binarization threshold when generating graphic data with printBitmap and setBitmap. If you do not specify this property, the value is 128.

* This function is only available for thermal printers. This property is available with JavaPOS Driver V1.13.12 or later.

■ BaseTextMagnification Setting

ex. <prop name="baseTextMagnification" type="String" value="x1_5"/>

When you use the base text magnification setting, add the items mentioned above.

The following values are available.

x1_5 ... 1.5 times high and wide
standard ... Standard (default)

* This setting applies only to the 300dpi model (MCL21).

4.3 CashDrawer Connection Settings

If you do not specify these items, the default value is valid.

mC-Connect Drawer has two external device drive ports.
Connect to the appropriate port to suit your environment.

■ Configuration - CashDrawer Circuit

ex. `<prop name="controlPrimaryDrawer" type="Boolean" value="True" />`

You can set the Cash Draw Circuit you want to use. To use peripheral drive 1 for connecting the cash drawer, set this property to "True". To use peripheral device 2, set this property to "False". The default value is "True".

■ Configuration - On Pulse Width

ex. `<prop name="firePulseWidth" type="Long" value="200" />`

This property controls how long the "On pulse" is fired for. The default value is "200" milliseconds.

* The pulse width for Peripheral Unit 2 is fixed at 200 milliseconds.

■ Configuration - Off Pulse Width

ex. `<prop name="sleepPulseWidth" type="Long" value="200" />`

This property controls how long of a pause there will be between pulses. The default value is "200" milliseconds.

* The pulse width for Peripheral Unit 2 is fixed at 200 milliseconds.

■ Configuration - Drawer Status

ex. `<prop name="capStatus" type="Boolean" value="True" />`

If your cash drawer supports status reporting, you may get the drawer open/closed status reports by setting the option to 'True'. The default value is "False".

* This feature is only valid when the cash drawer that you are using supports an open-close detector switch.

■ Configuration - Status Signal

ex. `<prop name="signalLevelHighWhenDrawerOpen" type="Boolean" value="True" />`

Configure the status signal according to the specification of your cash drawer. The default value is "True".

'True': Open/Close detection SW set to High when the cash drawer is open.

'False': Open/Close detection SW set to Low when the cash drawer is open.

4.4 MICR Connection Settings

■ MICR Format Setting

ex. <prop name="format" type="String" value="E13B" />

To use the E-13B MICR format (as defined by the ANSI MICR), set this property to "E13B". To use the CMC-7 MICR format (as defined by the ISO), set this property to "CMC7".

Note: 1) Only HSP7000 is supported.
2) USB Printer Class is not supported.

5. Sample Program

The sample program is available in "StarReceiptTest.java", "StarSlipTest.java", "StarCashDrawerTest.java" and "StarMICRTest.java".

Use them as references for developing your applications.

The following is the reference of "StarReceiptTest.java" for the print test.

1. Open the "StarReceiptTest.java". Specify "location of jpos.xml" at "System.setProperty method". The "location of jpos.xml" is "Full(Relative) Path + jpos.xml" or "jpos.xml" (if jpos.xml and running application are in the same package).

ex. Full Path :

```
<Windows>
"C:\Program Files\JavaPOS\bin\jpos.xml"

<Linux> <Mac>
"/usr/local/javapos/bin/jpos.xml"
```

<StarReceiptTest.java>

```
/*
 * If you want to place the jpos.xml file elsewhere on
 * system then uncomment the following line and specify
 * jpos.xml.
 *
 * If you want to place the jpos.xml file on a webserver for access over
 * the internet then uncomment the second System.setProperty line below
 * and specify the full URL to jpos.xml.
 */
System.setProperty( JposPropertiesConst. JPOS_POPULATOR_FILE_PROP_NAME, "jpos.xml");
```

"C:\Program Files\JavaPOS\bin\jpos.xml",
 "/usr/local/javapos/bin/jpos.xml",
 "../bin/jpos.xml",
 "jpos.xml", etc...



2. Put the "logicalName" in "the jpos.xml" to the argument of "open method" in the "StarReceiptTest.java". Also "logicalName" can put any name.

<jpos.xml>

```
<JposEntry logicalName="POSPrinter_windows_usb_printer_class">
  <creation factoryClass="com.star-micronics.starjavapos.ServiceInstanceFactory" serviceClass="
  <vendor name="Star Micronics" url="www.star-m.jp/eng/index.htm" />
```

<StarReceiptTest.java>

```
// open the printer object according to the entry names defined in jpos.xml
printer.open("POSPrinter_windows_usb_printer_class");
// claim exclusive usage of the printer object
printer.claim(1);
// enable the device for input and output
printer.setDeviceEnabled(true);
```



3. Save the StarReceiptTest.java. In Command Prompt(Terminal), run the following commands by administrator authority for checking a "sample receipt printing".

*In this example, run the commands by administrator authority due to a place of directory.

- i) Change to the directory of running application.

cd "Place of performing Java application"

- ii) The "javac" command compiles a "java file" and create a "class file".

<Windows>

javac -classpath .;jarFile1.jar;jarFile2.jar;...;jarFileN.jar StarReceiptTest.java

<Linux><Mac>

javac -classpath .:jarFile1.jar;jarFile2.jar;...:jarFileN.jar StarReceiptTest.java

- iii) The "java" command run the "class file".

<Windows>

java -classpath .;jarFile1.jar;jarFile2.jar;...;jarFileN.jar StarReceiptTest

<Linux><Mac>

java -classpath .:jarFile1.jar;jarFile2.jar;...:jarFileN.jar StarReceiptTest

*"jarFileN.jar" is "Full(Relative) Path + jar file name" or "jar file name".

<Windows>

```
C:\Windows\System32> cd C:\Program Files\Java\POS\bin
C:\Program Files\Java\POS\bin> javac -classpath "C:\Program Files\Java\POS\lib\ipos113-controls.jar";"C:\Program Files\Java\POS\lib\jcl.jar" StarReceiptTest.java
C:\Program Files\Java\POS\bin> java -classpath .;"C:\Program Files\Java\POS\lib\ipos113-controls.jar";"C:\Program Files\Java\POS\lib\jcl.jar";"C:\Program Files\Java\POS\lib\stario.jar";"C:\Program Files\Java\POS\lib\stariavapos.jar";"C:\Program Files\Java\POS\lib\xercesimpl.jar";"C:\Program Files\Java\POS\lib\xml-apis.jar";"C:\Program Files\Java\POS\lib\CommandEmulator.jar" StarReceiptTest
Async transaction print submitted: time = 1355368062172 output id = 1
OutputCompleteEvent received: time = 1355368063794 output id = 1
StarReceiptTest finished.
```

<Linux>

```
dev4@dev4-A0D: i) ~$ cd /usr/local/JavaPOS/bin/
dev4@dev4-A0D270:/usr/local/JavaPOS/b ii) sudo javac -classpath "/usr/local/JavaP
OS/lib/jpos113-controls.jar":"/usr/local/JavaPOS/lib/jcl.jar" StarReceiptTest.ja
va
dev4@dev4-A0D270:/usr/local/JavaPOS/b iii) sudo java -classpath .:"/usr/local/Java
POS/lib/starjavapos.jar":"/usr/local/JavaPOS/lib/stario.jar":"/usr/local/JavaPOS
/lib/commandemulator.jar":"/usr/local/JavaPOS/lib/jpos113-controls.jar":"/usr/lo
cal/JavaPOS/lib/jcl.jar":"/usr/local/JavaPOS/lib/xercesimpl.jar":"/usr/local/Jav
aPOS/lib/xml-apis.jar" StarReceiptTest
Async transaction print submitted: time = 1355382755333 output id = 1
OutputCompleteEvent received: time = 1355382756830 output id = 1
StarReceiptTest finished.
dev4@dev4-A0D270:/usr/local/JavaPOS/bin$
```

<Mac>

```
satsuki-no-MacBook:~ satsu i) cd /usr/local/JavaPOS/bin/
satsuki-no-MacBook:bin satsu ii) sudo javac -classpath "/usr/local/JavaPOS/lib/jp
os113-controls.jar":"/usr/local/JavaPOS/lib/jcl.jar" StarReceiptTest.java
satsuki-no-MacBook:bin satsu iii) sudo java -classpath .:"/usr/local/JavaPOS/lib/s
tarjavapos.jar":"/usr/local/JavaPOS/lib/stario.jar":"/usr/local/JavaPOS/lib/jpos
113-controls.jar":"/usr/local/JavaPOS/lib/jcl.jar":"/usr/local/JavaPOS/lib/xerce
simpl.jar":"/usr/local/JavaPOS/lib/xml-apis.jar" StarReceiptTest
Async transaction print submitted: time = 1355374123514 output id = 1
OutputCompleteEvent received: time = 1355374124364 output id = 1
StarReceiptTest finished.
satsuki-no-MacBook:bin satsuki$
```

*** About a "-classpath" option of "javac" or "java" command.**

At "-classpath", specify the required "jar files" to compile and run applications.

In addition to the above example, if there are in the same directory the "application executable file" (.class) and "jar files", can specify only "jar file name"(not need file path).

ex. Particular place :

<Windows>

jar file, xml, java, gif - "C:\Program Files\JavaPOS"

<Linux> <Mac>

jar file, xml, java, gif - "/usr/local/javapos"

Commands for a java application :

<Windows>

```
javac -classpath jpos113-controls.jar;jcl.jar StarReceiptTest.java
java -classpath .;starjavapos.jar;stario.jar;jpos113-controls.jar;
    jcl.jar;xercesimpl.jar;xml-apis.jar StarReceiptTest
```

<Linux>

```
javac -classpath jpos113-controls.jar;jcl.jar StarReceiptTest.java
java -classpath .:starjavapos.jar:stario.jar:commandemulator.jar:
    jpos113-controls.jar;jcl.jar:xercesimpl.jar:xml-apis.jar StarReceiptTest
```

<Mac>

```
javac -classpath jpos113-controls.jar;jcl.jar StarReceiptTest.java
java -classpath .:starjavapos.jar:stario.jar;jpos113-controls.jar:
    jcl.jar;xercesimpl.jar:xml-apis.jar StarReceiptTest
```

* About commands for running, if files are in the same folder, refer to the beginning of the StarReceiptTest.java.

6. Service Objects

The following tables list this driver's supporting status of JavaPOS service objects.

Please refer to the *Java for Retail POS Programming Guide* about the specifications of the Service Objects.

6.1 POSPrinter

The Service Objects of POSPrinter is supported in Star Line / StarPRNT Mode.

■ Properties

Property	Supporting status		Remarks
AutoDisable	-		Not applicable JavaPOS
CapCompareFirmwareVersion	○	FALSE	
CapPowerReporting	○	JPOS_PR_ADVANCED	
CapStatisticsReporting	○	FALSE	
CapUpdateFirmware	○	FALSE	
CapUpdateStatistics	○	FALSE	
CheckHealthText	○		
Claimed	○		
DataCount	-		Not applicable JavaPOS
DataEventEnabled	-		Not applicable JavaPOS
DeviceEnabled	○		
FreezeEvents	○		
OutputID	○		The initial value is zero. The value is incremented for every asynchronous output. The value range is 1 to 10000.
PowerNotify	○		
PowerState	○		
State	○		
DeviceControlDescription	○		
DeviceControlVersion	○	1013000	
DeviceServiceDescription	○	"Star Micronics JavaPOS POSPrinter Service Driver"	
DeviceServiceVersion	○	1013016	
PhysicalDeviceDescription	○	"Star Micronics ***** (Model Name)"	
PhysicalDeviceName	○	Thermal Printer : "Star Micronics single station thermal printer" Dot Printer : "Star Micronics single station dot printer" Hybrid Printer : "Star Micronics hybrid printer"	
CapCharacterSet	○	PTR_CCS_ASCII	
CapConcurrentJrnRec	○	FALSE	
CapConcurrentJrnSlp	○	FALSE	
CapConcurrentPageMode	○	FALSE	
CapConcurrentRecSlp	○	FALSE	
CapCoverSensor	○		
CapMapCharacterSet	○	FALSE	
CapTransaction	○	TRUE	
CapJrnPresent	○	FALSE	
CapJrn2Color	○	FALSE	
CapJrnBold	○	FALSE	
CapJrnDhigh	○	FALSE	
CapJrnDwide	○	FALSE	
CapJrnDwideDhigh	○	FALSE	
CapJrnEmptySensor	○	FALSE	

Property	Supporting status		Remarks
CapJrnItalic	○	FALSE	
CapJrnNearEndSensor	○	FALSE	
CapJrnUnderline	○	FALSE	
CapJrnCartridgeSensor	○	0	
CapJrnColor	○	0	
CapRecPresent	○	TRUE	
CapRec2Color	△		Model dependence
CapRecBarCode	○		Dot Printer : FALSE
CapRecBitmap	○	TRUE	
CapRecBold	○	TRUE	
CapRecDhigh	○	TRUE	
CapRecDwide	○	TRUE	
CapRecDwideDhigh	○	TRUE	
CapRecEmptySensor	○	TRUE	
CapRecItalic	○	FALSE	
CapRecLeft90	○	FALSE	
CapRecNearEndSensor	△		Model dependence
CapRecPapercut	△		Model dependence
CapRecRight90	○	FALSE	
CapRecRotate180	○	TRUE	
CapRecStamp	○	FALSE	
CapRecUnderline	○	TRUE	
CapRecCartridgeSensor	○	0	
CapRecColor	△		Model dependence
CapRecMarkFeed	△		Model dependence
CapRecPageMode	○	FALSE	
CapRecRuledLine	○	0	
CapSlpPresent	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpFullslip	○	FALSE	
CapSlp2Color	○	FALSE	
CapSlpBarCode	○	FALSE	
CapSlpBitmap	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpBold	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpDhigh	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpDwide	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpDwideDhigh	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpEmptySensor	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpItalic	○	FALSE	
CapSlpLeft90	○	FALSE	
CapSlpNearEndSensor	○	FALSE	
CapSlpRight90	○	FALSE	
CapSlpRotate180	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpUnderline	○		Non HSP7000: FALSE, HSP7000 : TRUE
CapSlpBothSidesPrint	○	FALSE	
CapSlpCartridgeSensor	○	0	
CapSlpColor	○	0	
CapSlpPageMode	○	FALSE	
CapSlpRuledLine	○	0	
AsyncMode	○		
CartridgeNotify	○	PTR_CN_DISABLED	
CharacterSet	○		

Property	Supporting status		Remarks
CharacterSetList	○		
CoverOpen	○		
ErrorLevel	○	○	
ErrorStation	○	○	
ErrorString	○	○	
FontTypefaceList	○	""	
FlagWhenIdle	○	○	
MapCharacterSet	○	FALSE	
MapMode	○		
PageModeArea	○	""	
PageModeDescriptor	○	0	
PageModeHorizontalPosition	○	0	
PageModePrintArea	○	""	
PageModePrintDirection	○	0	
PageModeStation	○	0	
PageModeVerticalPosition	○	0	
RotateSpecial	○		
JrnLineChars	○	0	
JrnLineCharsList	○	""	
JrnLineHeight	○	0	
JrnLineSpacing	○	0	
JrnLineWidth	○	0	
JrnLetterQuality	○		
JrnEmpty	○	FALSE	
JrnNearEnd	○	FALSE	
JrnCartridgeState	○	PTR_CART_UNKNOWN	
JrnCurrentCartridge	○	0	
RecLineChars	○		
RecLineCharsList	○		
RecLineHeight	○		
RecLineSpacing	○		
RecLineWidth	○		
RecLetterQuality	○		
RecEmpty	○		
RecNearEnd	△		Model dependence
RecSidewaysMaxLines	○	0	
RecSidewaysMaxChars	○	0	
RecLinesToPaperCut	○		
RecBarCodeRotationList	○	0,180	
RecBitmapRotationList	○	0,180	
RecCartridgeState	○	PTR_CART_UNKNOWN	
RecCurrentCartridge	○	0	
SlpLineChars	○		Non HSP7000: 0
SlpLineCharsList	○		Non HSP7000: ""
SlpLineHeight	○		Non HSP7000: 0, HSP7000: 9
SlpLineSpacing	○		Non HSP7000: 0, HSP7000: Can be set to a value between 9 and 85
SlpLineWidth	○		Non HSP7000: 0, HSP7000: 270
SlpLetterQuality	○		
SlpEmpty	○		Non HSP7000: FALSE, HSP7000: TRUE

Property	Supporting status		Remarks
SlpNearEnd	☐		Non HSP7000: FALSE, HSP7000: TRUE
SlpSidewaysMaxLines	☐	0	
SlpSidewaysMaxChars	☐	0	
SlpMaxLines	☐		Non HSP7000: 0
SlpLinesNearEndToEnd	☐	0	
SlpBarCodeRotationList	☐	""	
SlpBitmapRotationList	☐		Non HSP7000: "", HSP7000: 0,180
SlpPrintSide	☐	PTR_PS_UNKNOWN	
SlpCartridgeState	☐	PTR_CART_UNKNOWN	
SlpCurrentCartridge	☐	0	

■ Methods

Method	Supporting status		Remarks
Open	○		
Close	○		
Claim	○		
Release	○		
CheckHealth	○		
ClearInput	-		Not applicable JavaPOS
ClearInputProperties	-		Not applicable JavaPOS
ClearOutput	○		
CompareFirmwareVersion	×		
DirectIO	×		
ResetStatistics	×		
RetrieveStatistics	×		
UpdateFirmware	×		
UpdateStatistics	×		
PrintNormal	○		
PrintTwoNormal	×		
PrintImmediate	○		
BeginInsertion	○		
EndInsertion	○		
BeginRemoval	○		
EndRemoval	○		
CutPaper	○		
RotatePrint	○		
PrintBarCode	○		Refer to the following Note
PrintBitmap	○		
TransactionPrint	○		
ValidateData	○		
SetBitmap	○		
SetLogo	○		
ChangePrintSide	×		
MarkFeed	△		Model dependence
ClearPrintArea	×		
PageModePrint	×		
PrintMemoryBitmap	×		
DrawRuledLine	×		

PrintBarCode Method Notes :

- 1) The symbology parameter can be set to the following values (supported barcodes).
PTR_BCS_UPCA, PTR_BCS_UPCE, PTR_BCS_JAN8, PTR_BCS_JAN13, PTR_BCS_ITF, PTR_BCS_Codabar,
PTR_BCS_Code39, PTR_BCS_Code93, PTR_BCS_Code128, PTR_BCS_Code128_Parsed, PTR_BCS_QRCODE*,
PTR_BCS_PDF417*
* For details on 2D codes, refer to 3).
- 2) The height parameter can be set to the following values.
1 to 255 (When the MapMode property is set to PTR_MM_DOTS)

3) Parameter settings for 2D codes (QR code, PDF417).

*A combination of Linux and TSP100 (except TSP100IV series) cannot print 2D codes.

ex.

```
printer.printBarCode(POSPrinterConst.PTR_S_RECEIPT, "http://StarMicronics.com", POSPrinterConst.PTR_BCS_QRCODE,
10 * 100, 60 * 100, POSPrinterConst.PTR_BC_CENTER, POSPrinterConst.PTR_BC_TEXT_BELOW);"
```

Settable parameters (*Symbology*)

QR code PTR_BCS_QRCODE

PDF417 PTR_BCS_PDF417

* When printing 2D codes, the *Height*, *Width* and *TextPosition* parameters are ignored.

For setting the parameters of 2D codes, include the following properties for jpos.xml.

If properties are not included, the printer driver will operate using the default command specifications.

<prop name="PDF417Line" type="Integer" value="0" />	Set PDF417 number of lines [0, 3 ~ 90]
<prop name="PDF417Column" type="Integer" value="0" />	Set PDF417 number of columns [0, 1 ~ 30]
<prop name="PDF417Ecc" type="Integer" value="1" />	Set PDF417 ECC (security level) [0 ~ 8]
<prop name="PDF417ModuleXdim" type="Integer" value="2" />	Set PDF417 module X direction size [1 ~ 10]
<prop name="PDF417Aspect" type="Integer" value="3" />	Set PDF417 module aspect ratio [1 ~ 10]
<prop name="QRCodeModel" type="Integer" value="2" />	Set QR code model [1, 2]
<prop name="QRCodeEcc" type="Integer" value="0" />	Set QR code mistake correction level [0 ~ 3]
<prop name="QRCodeCellSize" type="Integer" value="3" />	Set QR code cell size [1 ~ 8] Except MCL21, [1 ~ 12] MCL21

■ Events

Event	Supporting status	Remarks
DataEvent	-	Not applicable JavaPOS
DirectIOEvent	×	
ErrorEvent	○	
OutputCompleteEvent	○	
StatusUpdateEvent	○	

■ Escape Sequences

Escape Sequence	Supporting status	Remarks
ESC [#]P	○	Paper cut
ESC [#]fP	○	Feed and paper cut
ESC sP	×	Feed, Paper cut, and Stamp
ESC sL	×	Fire stamp
ESC #B	○	Print bitmap
ESC tL	○	Print top logo
ESC bL	○	Print bottom logo
ESC [#]fF	○	Feed lines
ESC [#]uF	○	Feed units
ESC [#]rF	△	Feed reverse
ESC #E	○	Pass through embedded data
ESC #R	△	Print in-line barcode
ESC #dL	×	Print in-line ruled line
ESC #fT	×	Font typeface selection
ESC [!#]bC	○	Bold
ESC [!#]uC	○	Underline
ESC [!#]iC	×	Italic
ESC [#]rC	△	Alternate color(Custom)
ESC [!#]rvC	○	Reverse video
ESC [#]sC	×	Shading
ESC 1C	○	Single high and wide
ESC 2C	○	Double wide
ESC 3C	○	Double high
ESC 4C	○	Double high and wide
ESC #hC	○	Scale horizontally
ESC #vC	○	Scale vertically
ESC [#]fC	×	RGB Color
ESC [!#]tbC	×	SubScript
ESC [!#]tpC	×	SuperScript
ESC cA	○	Center
ESC rA	○	Right justify
ESC lA	○	Left justify
ESC [!#]stC	×	Strike-through
ESC N	○	Normal

6.2 Cash Drawer

The Service Objects of Cash Drawer is supported in Star Line / StarPRNT Mode.

■ Properties

Property	Supporting status		Remarks
AutoDisable	-		Not applicable JavaPOS
CapCompareFirmwareVersion	○	FALSE	
CapPowerReporting	○	OS_PR_ADVANCED	
CapStatisticsReporting	○	FALSE	
CapUpdateFirmware	○	FALSE	
CapUpdateStatistics	○	FALSE	
CheckHealthText	○		
Claimed	○		
DataCount	-		Not applicable JavaPOS
DataEventEnabled	-		Not applicable JavaPOS
DeviceEnabled	○		
FreezeEvents	○		
OutputID	-		Not applicable JavaPOS
PowerNotify	○		
PowerState	○		
State	○		
DeviceControlDescription	○	"JavaPOS CashDrawer Device Control"	
DeviceControlVersion	○	1013000	
PhysicalDeviceServiceDescription	○	"Star Micronics JavaPOS CashDrawer Service Driver"	
DeviceServiceVersion	○	1013015	
PhysicalDeviceDescription	○	"Printer controlled cash drawer"	
PhysicalDeviceName	○	"Star Micronics Cash Drawer Controller"	
CapStatus	○		
CapStatusMultiDrawerDetect	○	FALSE	
DrawerOpened	○		

■ Methods

Method	Supporting status		Remarks
Open	○		
Close	○		
ClaimDevice	○		
Release	○		
CheckHealth	○		
ClearInput	-		Not applicable JavaPOS
ClearInputProperties	-		Not applicable JavaPOS
ClearOutput	-		Not applicable JavaPOS
CompareFirmwareVersion	×		
DirectIO	×		
ResetStatistics	×		
RetrieveStatistics	×		
UpdateFirmware	×		
UpdateStatistics	×		
OpenDrawer	○		
WaitForDrawerClose	○		

■ Events

Event	Supporting status	Remarks
DataEvent	-	Not applicable JavaPOS
DirectIOEvent	×	
ErrorEvent	-	Not applicable JavaPOS
OutputCompleteEvent	-	Not applicable JavaPOS
StatusUpdateEvent	○	

6.3 MICR

The Service Objects of the MICR Reader are supported in Star Line Mode.

■ Properties

Property	Supporting status	Remarks
AutoDisable	○	FALSE
CapCompareFirmwareVersion	○	FALSE
CapPowerReporting	○	JPOS_PR_ADVANCED
CapStatisticsReporting	○	FALSE
CapUpdateFirmware	○	FALSE
CapUpdateStatistics	○	FALSE
CheckHealthText	○	
Claimed	○	
DataCount	○	
DataEventEnabled	○	
DeviceEnabled	○	
FreezeEvents	○	
OutputID	×	
PowerNotify	○	
PowerState	○	
State	○	
DeviceControlDescription	○	"JavaPOS MICR Device Control"
DeviceControlVersion	○	1013000
DeviceServiceDescription	○	"Star Micronics JavaPOS MICR Service Driver"
DeviceServiceVersion	○	1013015
PhysicalDeviceDescription	○	"MICR"
PhysicalDeviceName	○	"Star Micronics MICR"
AccountNumber	○	
Amount	○	
BankNumber	○	
CapValidationDevice	○	TRUE
CheckType	○	
CountryCode	○	
EPC	○	
RawData	○	
SerialNumber	○	
TransitNumber	○	

■ Methods

Method	Supporting status		Remarks
Open	○		
Close	○		
Claim	○		
Release	○		
CheckHealth	○		
ClearInput	○		
ClearInputProperties	○		
ClearOutput	-		Not applicable JavaPOS
CompareFirmwareVersion	×		
DirectIO	×		
ResetStatistics	×		
RetrieveStatistics	×		
UpdateFirmware	×		
UpdateStatistics	×		
beginInsertion	○		
beginRemoval	○		
endInsertion	○		
endRemoval	○		

■ Events

Event	Supporting status		Remarks
DataEvent	○		
DirectIOEvent	-		Not applicable JavaPOS
ErrorEvent	○		
OutputCompleteEvent	-		Not applicable JavaPOS
StatusUpdateEvent	○		

7. Version History

Rev. No.	Date of Revision	Changes
Rev. 1.0	Apr. 2011	First edition.
Rev. 2.0	Nov. 2011	Error correction.
Rev. 3.0	Jun. 2012	Support to the driver packages 1.13.3. -TUP900 MSW setting(NSB) changed -Package name and support OS for Mac changed -Escape Sequence(Print Bitmap) changed -Error correction
Rev. 4.0	Dec. 2012	Support to the driver packages 1.13.4. -Add TSP650II -Add Bluetooth Interface -Add Installation Instructions -Add Sample Program
Rev. 5.0	Oct. 2013	Support to the driver packages 1.13.5
Rev. 5.1	Nov. 2013	Support to the driver packages 1.13.6 -Add SAC10
Rev. 6.0	Apr. 2014	Support to the driver packages 1.13.7 -Add TSP700II/TSP800II/SP742 Bluetooth Interface
Rev. 6.1	Jan. 2015	Support to the driver packages 1.13.8 -Add FVP10 Bluetooth Interface
Rev. 6.2	Sep. 2015	-Add Windows 10 support
Rev. 6.3	Dec. 2015	Support to the driver packages 1.13.9 -Add TSP100IIIW/LAN
Rev. 6.4	Jun. 2016	Support to the driver packages 1.13.10 - Add TSP100IIIBI - Add 2D code support - End of suport Mac OS X 10.5 / 10.6
Rev. 6.5	Mar. 2017	- Add TSP100IIIU
Rev. 6.6	Jun. 2018	Error correction.
Rev. 6.7	Nov. 2018	Added a note of communication port.
Rev. 6.8	Apr. 2019	Support to the driver packages 1.13.11 Added the port name specifications by Bluetooth MAC address. (Windows only)
Rev. 6.9	Dec. 2019	Support to the driver packages 1.13.12 - Add support Mac OS X 10.15. End of support MacOS X 10.10. - Support TSP100 series with Linux 64bit. - End of support TSP113, TSP113GT, TSP113LAN and SAC10.
Rev. 7.0	Jan. 2022	Support to the driver packages 1.13.13 - Support custom colors for POS Printer escape sequence (SP700 only). - Add Windows 11 support. Add macOS 12 support. - End of support Windows 8, Mac OS X 10.10 to 10.12. - End of support FVP10, TSP650 and SP500.

Rev. No.	Date of Revision	Changes
Rev. 8.0	Oct. 2022	Integrated the StarPRNT Manual into this Manual. Support to the driver packages 1.13.14 - Add MCL32. - End of support Windows 7, 8.1. - End of support TSP143U, TSP143GT and TSP143LAN.
Rev. 8.1	Aug. 2023	Add TSP143IV-UE SK support.
Rev. 8.2	Nov. 2023	Add MCP31CI and MCP31CBI support.
Rev. 8.3	Feb. 2024	Add POP10CBI support.
Rev. 8.4	May. 2024	Support to the driver packages 1.13.15 - Add BSC10II.
Rev. 8.5	Oct. 2024	Add TSP143IV-UEWB, TSP143IV-UEWB SK support. End of support CentOS. Add the list to the Model Name Settings in the 4.1 Common Settings.
Rev. 8.6	May. 2025	Support to the driver packages 1.13.16 - Add MCL21CI, MCL21CI LBL, MCL21CWBI, MCL21CWBI LBL support. - End of support openSUSE and Fedora.
Rev. 8.7	Mar. 2026	Support to the driver packages 1.13.17 - Add MCD10UEWB



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