

Application Programming Guide

JavaPOS Driver

Ver. 1.01

AP3

Introduction

This manual provides information on the AP3 JavaPOS driver as well as on the usage POS printer products offered by AP3.

The following are terms contained in this manual.

- JDK : Java Development Kit
- JRE : Java Runtime Environment
- JavaPOS : Java Point of Sale
- JCL Utility : JavaPOS Configuration Loader Utility

[Reference Websites]

<http://www.javapos.com> : Java POS committee website

<http://java.com> : Official Java website

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1. Development environment

1-1 Communication Configuration

- Communication Configuration for serial interface
You will set communication configuration in JCL Utility.

Printer Model	Baud rate	Printer Type	etc
AP3	9600/19200/38400/57600/115200	Mono Thermal	180 dpi
AP3-3	9600/19200/38400/57600/115200	Mono Thermal	203 dpi



Caution

Check the default communication setting.
For more details refer to the user manual included in the printer package.

2. Property / Method

2-1 Property Range / Default Value

2-1-1 Capability property setting value

Capability property	AP3
CapCompareFirmwareVersion	FALSE
CapPowerReporting	TRUE
CapStatisticsReporting	FALSE
CapUpdateFirmware	FALSE
CapUpdateStatistics	FALSE
CapTransaction	TRUE
CapCoverSensor	TRUE
CapConcurrentRecSlp	FALSE
CapConcurrentJrnSlp	FALSE
CapConcurrentJrnRec	FALSE
CapCharacterSet	TRUE
CapRecUnderline	TRUE
CapRecPageMode	TRUE
CapCuncurrentPageMode	FALSE
CapRecStamp	FALSE
CapRecRotate180	TRUE
CapRecRight90	TRUE
CapRecPapercut	TRUE
CapRecNearEndSensor	FALSE
CapRecMarkFeed	FALSE
CapRecLeft90	TRUE
CapRecItalic	FALSE
CapRecEmptySensor	TRUE
CapRecDwideDhigh	TRUE
CapRecDwide	TRUE
CapRecDhigh	TRUE
CapRecColor	FALSE
CapRecCartridgeSensor	FALSE
CapRecBold	TRUE
CapRecBitmap	TRUE
CapRecBarCode	TRUE
CapRec2Color	FALSE
CapRecPresent	FALSE

2-1-2 Property default value / Range

1) List Property

Model	RecLineChars List	RecBarCode RotationList	FontTypeface List	RecBitmap List
AP3	"42,56"	"0"	"0"	0,L90,R90,180
AP3-3	"48,64"	"0"	"0"	0,L90,R90,180

- CharacterSetList Property

Model	Value
AP3 / AP3-3	437,1(Katakana),850,860,863,865,1252,866,852,858,862,864,23(Thai42),1253,1254,1257,27(Farsi),1251,737,775,31(Thai14),32(Hebrew Old),1255,34(Thai11),35(Thai18),855,857,928,39(Thai16),1256,1258,42(Khmer),1250,255

- Receipt Width and Height Property

Model	RecLineHeight	RecLineWidth	RecLinePaperCut
AP3	24	512	5
AP3-3	24	576	5

- RecLineSpacing Property

Property	Range		
	Default	Max	Min
RecLineSpacing	16	127	0

2-1-3 POSPrinter Method

Method	Value
beginInsertion	X
beginRemoval	X
changePrintSide	X
clearPrintArea	O
cutPaper	O
drawRuledLine	X
endInsertion	X
endRemoval	X
markFeed	X
pageModePrint	O
printBarCode	O
printBitmap	O
printImmediate	O
printMemoryBitmap	X
printNormal	O
printTwoNormal	X
rotatePrint	O
setBitmap	O
setLogo	O
transactionPrint	O
validateData	O

O: Supported X: Not supported

2-1-4 POSPrinter Escape Sequences

Escape Sequence	Value
[#]P	O (value range: 0~100)
[#]fP	O (value range: 0~100)
[#]sP	X
sL	X
[#]B	O (value range: 1~20)
tL	O
bL	O
[#]IF	O (value range: 0~9999)
[#]uF Base Pitch [inch]	O
[#]rF Maximum [inch]	X
#E	X
#R	X
#dL	X
#fT	O
[!]bC	O
[!][#]uC	O
[!]iC	X
[#]rC	O
[!]rvC	O
[#]sC	X
1C	O
2C	O
3C	O
4C	O
#hC	O
#vC	O
[#]fC	X
[!]tbC	X
[!]tpC	X
cA	O
rA	O
lA	O
[!][#]stC	X
N	O

O: Supported X: Not supported

2-1-5 Color bitmap printing support

- AP3 JavaPOS Driver supports following image formats.
 - GIF, JPG, BMP Image Format.

3. Extended Functions

This section is to explain DirectIO method.

This method will operate properly only with AP3 POS printer.

3-1 DirectIO Method / Commands Description

Argument	Explanation	Type
Command	Pre-define constant	Long
pData	Number of output data / Value defined by command	Long
pString	Output Data	String

Command	Constantvalue	Description
PTR_DI_OUTPUT	0	Output defined pString data
PTR_DI_INTERNATIONAL_CHAR	1	International character set define

3-2 DirectIO Command

3-2-1 Direct Output

Argument	Command	PTR_DI_OUTPUT
	pData	Null
	pString	Output data
Description	Sends data without any process after checking printer status. "pString" is not affected by "BinaryConversion"	
Return	Result Code	ResultCodeExtended
	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_BUSY	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	0

3-2-2 International charset setting

Argument	Command	PTR_DI_INTERNATIONAL_CHAR
	pData	pre-defined constant PRN_DI_CHAR_USA: 0 PRN_DI_CHAR_FRANCE: 1 PRN_DI_CHAR_GERMANY: 2 PRN_DI_CHAR_UK: 3 PRN_DI_CHAR_DENMARK1: 4 PRN_DI_CHAR_SWEDEN: 5 PRN_DI_CHAR_ITALY: 6 PRN_DI_CHAR_SPAIN1: 7 PRN_DI_CHAR_JAPAN: 8 PRN_DI_CHAR_NORWAY: 9 PRN_DI_CHAR_DENMARK2: 10
	pString	Null
Description	Sets International character set. If CharSet property value is changed, International character set will be reset.	
Return	Result Code	ResultCodeExtended
	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_BUSY	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	0

3-3 DirectIOEvent Event

- Not used.

4. Error Information

This section is to explain returned error information when use POSPrinter methods.
For more details, please refer to the UPOS specifications.

4-1 ResultCode List

4-1-1 Claim method

Method	Result Code	ResultCodeExtended
Claim	JPOS_SUCCESS	0
	JPOS_E_ILLEGAL	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_CUTTER
		JPOS_EPTR_OVERHEAT
		JPOS_EPTR_REC_EMPTY
		JPOS_EPTR_JRN_EMPTY

4-1-2 CheckHealth method

Method	Result Code	ResultCodeExtended
CheckHealth	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT

4-1-3 ClearOutput method

Method	Result Code	ResultCodeExtended
ClearOutput	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0

4-1-4 DirectIO method

Method	Result Code	ResultCodeExtended
DirectIO	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY

4-1-5 PrintNormal method

Method	Result Code	ResultCodeExtended
PrintNormal	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY

4-1-6 PrintImmediate method

Method	Result Code	ResultCodeExtended
PrintImmediate	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY

4-1-7 CutPaper method

Method	Result Code	ResultCodeExtended
CutPaper	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY

4-1-8 RotatePrint method

Method	Result Code	ResultCodeExtended
RotatePrint	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY

4-1-9 PrintBitmap method

Method	Result Code	ResultCodeExtended
PrintBitmap	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_NOEXIST	0
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY
		JPOS_EPTR_SLP_EMPTY
		JPOS_EPTR_TOOBIG
		JPOS_EPTR_BADFORMAT

4-1-10 SetBitmap method

Method	Result Code	ResultCodeExtended
SetBitmap	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_NOEXIST	0
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY
		JPOS_EPTR_SLP_EMPTY
		JPOS_EPTR_TOOBIG
		JPOS_EPTR_BADFORMAT

4-1-11 SetLogo method

Method	Result Code	ResultCodeExtended
SetLogo	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0

4-1-12 TransactionPrint method

Method	Result Code	ResultCodeExtended
TransactionPrint	JPOS_SUCCESS	0
	JPOS_E_CLOSED	0
	JPOS_E_CLAIMED	0
	JPOS_E_NOTCLAIMED	0
	JPOS_E_DISABLED	0
	JPOS_E_ILLEGAL	0
	JPOS_E_OFFLINE	0
	JPOS_E_FAILURE	JPOS_EPTR_UNRECOVERABLE
		JPOS_EPTR_CUTTER
		JPOS_EPTR_MECHANICAL
		JPOS_EPTR_OVERHEAT
	JPOS_E_EXTENDED	JPOS_EPTR_COVER_OPEN
		JPOS_EPTR_JRN_EMPTY
		JPOS_EPTR_REC_EMPTY
		JPOS_EPTR_SLP_EMPTY
		JPOS_EPTR_SLP_EMPTY

5. Precautions

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- 2) The contents of this documentation are subject to change without notice.
- 3) Comments and notification of any mistakes in this documentation are gratefully accepted.
- 4) This software cannot be used with other equipment than the specified.
- 5) AP3 will not be responsible for any consequences resulting from the use of any information in this documentation.
- 6) AP3 JavaPOS driver is designed to operate properly with the latest firmware of each model. If the printer doesn't operate properly, please check the firmware version and contact the manufacturer.

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Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer “OFF”, before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer “OFF”.

Revision history

[illegible]