

Application Programming Guide

OPOS Driver

Ver. 1.01

AP3

Introduction

This is a manual about how to set and configure device and to develop applications to use AP3 POS printer with AP3 OPOS driver.

Before use AP3 POS printer, set and configure printer by using AP3 OPOS driver Setup Utility.

Throughout this manual, “OLE for Retail POS” is called “OPOS”.

Throughout this manual, “Unified for Retail POS” is called “UPOS”.

[Further Source]

OLE for Retail POS committee available from <http://monroecs.com/opos.htm>

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1. Development environment

1-1 Communication Configuration

- Communication Configuration for serial interface.
- You will set communication configuration in AP3 OPOS Setup 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



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

2. Properties / Methods

2-1 Properties Range / Default Value

2-1-1 Capability properties 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	TRUE

2-1-2 Properties default value / range

1) List Property

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

2) 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

3) Receipt Width and Height Property

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

4) RecLineSpacing Property

Property	Range		
	Default	Max	Min
RecLineSpacing	16	127	0

2-1-3 POSPrinter Methods

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	O
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	O
#R	X
#dL	X
#T	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
IA	O
[!][#]stC	X
N	O

O: Supported X: Not supported



Caution

To know more about Escape Sequence, please refer to UPOS 1.13.

2-1-5 Color bitmap printing support

AP3 OPOS Driver supports following image formats.

- GIF, JPG, BMP Image Format.

2-1-6 PageMode printing support

AP3 Thermal printers support page mode printing.

* Methods used with Page Mode Printing

Method	Value
printNormal	O
printBitmap	X
printBarcode	O
PrintMemoryBitmap	X

O: Supported X: Not supported

3. Extended Functions

This section is to explain DirectIO method.

This method will operate properly only with AP3 POS printer.

3-1 DirectIO Method

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

3-1-1 AP3 OPOS DirectIO Commands Description

Command	Constant	Description
PTR_DI_OUTPUT	0	Output the pString data
PTR_DI_INTERNATIONAL_CHAR	1	Define the international character set

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
	OPOS_SUCCESS	0
	OPOS_E_CLOSED	0
	OPOS_E_CLAIMED	0
	OPOS_E_NOTCLAIMED	0
	OPOS_E_DISABLED	0
	OPOS_E_BUSY	0
	OPOS_E_ILLEGAL	0
	OPOS_E_OFFLINE	0
	OPOS_E_FAILURE	0

3-2-2 International charset setting

Argument	Command	PTR_DI_INTERNATIONAL_CHAR
	pData	constant value which pre-defined 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_SPAIN: 7 PRN_DI_CHAR_JAPAN: 8 PRN_DI_CHAR_NORWAY: 9 PRN_DI_CHAR_DENMARK2: 10
	pString	Empty string
Description	Sets International character set. If CharSet property value is changed, International character set will be reset.	
Return	Result Code	ResultCodeExtended
	OPOS_SUCCESS	0
	OPOS_E_CLOSED	0
	OPOS_E_CLAIMED	0
	OPOS_E_NOTCLAIMED	0
	OPOS_E_DISABLED	0
	OPOS_E_BUSY	0
	OPOS_E_ILLEGAL	0
	OPOS_E_OFFLINE	0
	OPOS_E_FAILURE	0

3-3 DirectIOEvent

- 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 ClaimDevice method

Method	Result Code	ResultCodeExtended
ClaimDevice	OPOS_E_ILLEGAL	OPOS_EPTR_UNRECOVERABLE
		OPOS_EPTR_MECHANICAL
		OPOS_EPTR_CUTTER
		OPOS_EPTR_OVERHEAT
		OPOS_EPTR_REC_EMPTY
		OPOS_EPTR_JRN_EMPTY

4-1-2 CheckHealth method

Method	Result Code	ResultCodeExtended
CheckHealth	OPOS_SUCCESS	0
	OPOS_E_CLOSED	0
	OPOS_E_CLAIMED	0
	OPOS_E_DISABLED	0
	OPOS_E_ILLEGAL	0
	OPOS_E_OFFLINE	0
	OPOS_E_FAILURE	OPOS_EPTR_UNRECOVERABLE
		OPOS_EPTR_CUTTER
		OPOS_EPTR_MECHANICAL
		OPOS_EPTR_OVERHEAT

4-1-3 ClearOutput method

Method	Result Code	ResultCodeExtended
ClearOutput	OPOS_SUCCESS	0
	OPOS_E_CLOSED	0
	OPOS_E_CLAIMED	0
	OPOS_E_NOTCLAIMED	0

4-1-4 DirectIO method

Method	Result Code	ResultCodeExtended	
DirectIO	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
OPOS_EPTR_REC_EMPTY			

4-1-5 PrintNormal method

Method	Result Code	ResultCodeExtended	
PrintNormal	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
OPOS_EPTR_REC_EMPTY			

4-1-6 PrintImmediate method

Method	Result Code	ResultCodeExtended	
PrintImmediate	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
OPOS_EPTR_REC_EMPTY			

4-1-7 CutPaper method

Method	Result Code	ResultCodeExtended	
CutPaper	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
OPOS_EPTR_REC_EMPTY			

4-1-8 RotatePrint method

Method	Result Code	ResultCodeExtended	
RotatePrint	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
			OPOS_EPTR_REC_EMPTY

4-1-9 PrintBitmap method

Method	Result Code	ResultCodeExtended	
PrintBitmap	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_NOEXIST		0
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
			OPOS_EPTR_REC_EMPTY
			OPOS_EPTR_SLP_EMPTY
OPOS_EPTR_TOOBIG			
		OPOS_EPTR_BADFORMAT	

4-1-10 SetBitmap method

Method	Result Code	ResultCodeExtended	
SetBitmap	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_NOEXIST	0	
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
			OPOS_EPTR_REC_EMPTY
			OPOS_EPTR_SLP_EMPTY
OPOS_EPTR_TOOBIG			
OPOS_EPTR_BADFORMAT			

4-1-11 SetLogo method

Method	Result Code	ResultCodeExtended
SetLogo	OPOS_SUCCESS	0
	OPOS_E_CLOSED	0
	OPOS_E_CLAIMED	0
	OPOS_E_NOTCLAIMED	0
	OPOS_E_DISABLED	0
	OPOS_E_ILLEGAL	0

4-1-12 TransactionPrint method

Method	Result Code	ResultCodeExtended	
TransactionPrint	OPOS_SUCCESS	0	
	OPOS_E_CLOSED	0	
	OPOS_E_CLAIMED	0	
	OPOS_E_NOTCLAIMED	0	
	OPOS_E_DISABLED	0	
	OPOS_E_ILLEGAL	0	
	OPOS_E_OFFLINE	0	
	OPOS_E_FAILURE		OPOS_EPTR_UNRECOVERABLE
			OPOS_EPTR_CUTTER
			OPOS_EPTR_MECHANICAL
			OPOS_EPTR_OVERHEAT
	OPOS_E_EXTENDED		OPOS_EPTR_COVER_OPEN
			OPOS_EPTR_JRN_EMPTY
			OPOS_EPTR_REC_EMPTY
			OPOS_EPTR_SLP_EMPTY

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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”.

