

# Opticon H-28 & H-29 Scanner SDK

## Developer's Guide



Opticon Sensors Europe BV  
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# Content

- 1. Introduction ..... 4
- 2. Opticon barcode scanner SDK structure..... 5
- 3. Opticon Barcode Scanner SDK..... 6
  - 3.1. Basic API ..... 6
  - 3.2. Listener and callback function ..... 7
  - 3.3. Result data..... 8
  - 3.4. CodeID..... 8
- 4. Opticon barcode scanner SDK workflow..... 11
  - 4.1. Decode mode ..... 11
  - 4.2. Trigger Mode ..... 12
  - 4.3. Setting Parameters..... 12
    - 4.3.1. AllSettings ..... 12
    - 4.3.2. PropertyID ..... 14
- 5. Sample Code..... 30
  - 5.1. Barcode Scan APP ..... 30
  - 5.2. Barcode Settings ..... 30
- 6. Acronym ..... 32

### Revision History

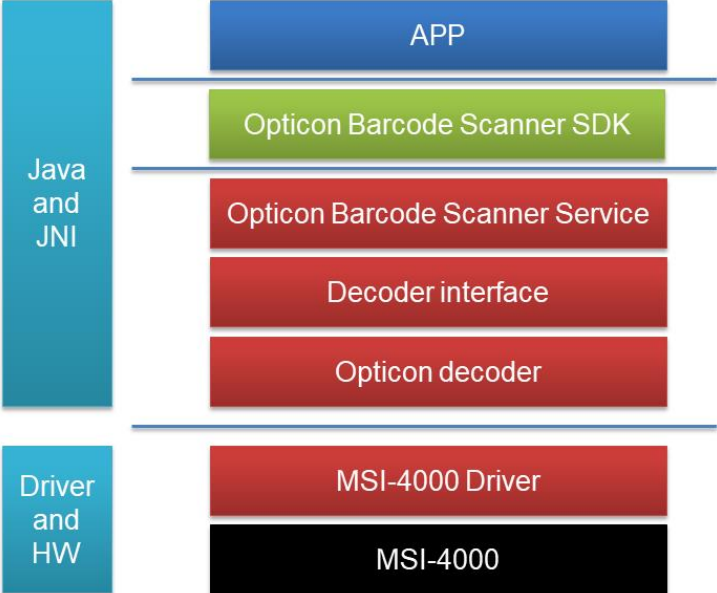
Date	Version	Modification
2018/05/02	0.0.1	Creation
2018/09/19	0.0.2	Integrate H-29

## 1. Introduction

This document is intended for developers to create scanner applications for the Opticon H-28 and H-29. The application can connect through this SDK to retrieve barcodes and control scanner settings. An example on how to do this is included.

## 2. Opticon barcode scanner SDK structure

To develop a scan application more easily, the Opticon SDK integrates the scan engine and SDK into one control method.



### 3. Opticon Barcode Scanner SDK

This chapter will introduce the Opticon Barcode scanner SDK.

#### 3.1. Basic API

This section will introduce the basic API.

```

Class BarcodeManager{
    void startDecode();
    void stopDecode();
    void startTrigger();
    void stopTrigger();
    void addListener(eventListener listener);
    void removeListener();
    void enableAllSymbologies();
    void disbleAllSymbologies();
    void resetAllSymbologies();
    void init();
    void deinit();
}
    
```

API	Description
void StartDecode()	Start decode function. It will auto stop while decode success or timeout.
void StopDecode()	Stop decode before timeout.
void StartTrigger()	Start trigger mode. This will start auto decode and keep decode until call StopTrigger function.
void StopTrigger()	Use to stop Trigger mode.
void addListener(eventListener listener)	Add callback listener, it will callback at start, stop, timeout and decode success.

void removeListener()	Remove callback listener.
void enableAllSymbologies()	Enable all supported symbologies.
void disableAllSymbologies()	Disable all supported symbologies.
void resetAllSymbologies()	Reset all settings of supported symbologies.
void init()	Initialize and connect to scanner service.
void deinit()	Release the connection.

### 3.2. Listener and callback function

This section will introduce the listener and callback function. User needs to register listener and override the callback function.

```
interface EventListener{
    void onReadData(BarcodeData result);
    void onStart();
    void onStop();
    void onTimeout();
    void onConnect();
    void onDisconnect();
}
```

Callback function	Description
void onReadData(BarcodeData result)	Decode success will get this callback, it can get the decode data in result.
void onStart()	StartDecode() or StartTrigger() success will callback this function.
void onStop()	StopDecode() or StopTrigger() success will callback this function.

void onTimeout()	While the scanner cannot get anything and the times up will callback this function. Default timeout setting is 2 sec.
void onConnect()	ScannerSDK will callback this function after connect to ScannerServer.
void onDisconnect()	ScannerSDK will callback this function after disconnect to ScannerServer.

### 3.3. Result data

This section will introduce the decode success result passed from onReadData callback function.

```
class BarcodeData{
String getText();
CodeID getCodeID();
byte[] getRawData();
}
```

Data	Description
String getText()	Get the decode string.
CodeID getCodeID()	Get the code type.
byte[] getRawData()	Get original byte data.

### 3.4. CodeID

This section will introduce the code type.

```
public static final int POSTAL_PLANET = 24;
public static final int POSTAL_4STATE = 26;
public static final int POSTAL_ROYALMAIL = 27;
public static final int POSTAL_AUSTRALIAN = 28;
```



```
public static final int POSTAL_KIX           = 29;
public static final int POSTAL_JAPAN        = 30;
public static final int UPC_A               = 64;
public static final int UPC_A_ADD2         = 65;
public static final int UPC_A_ADD5         = 66;
public static final int UPC_E              = 67;
public static final int UPC_E_ADD2         = 68;
public static final int UPC_E_ADD5         = 69;
public static final int EAN_13             = 70;
public static final int EAN_13_ADD2        = 71;
public static final int EAN_13_ADD5        = 72;
public static final int EAN_8              = 73;
public static final int EAN_8_ADD2         = 74;
public static final int EAN_8_ADD5         = 75;
public static final int Code39             = 76;
public static final int Code39_Full_ASCII  = 77;
public static final int Italian_Pharmaceutical = 78;
public static final int Codabar            = 79;
public static final int Codabar_ABC        = 80;
public static final int Codabar_CX        = 81;
public static final int Industrial_2of5    = 82;
public static final int Interleaved_2of5  = 83;
public static final int S_Code             = 84;
public static final int Matrix_2of5       = 85;
public static final int CHinese_Post       = 86;
public static final int IATA               = 87;
public static final int MSI_Plessey        = 88;
public static final int Telepen            = 89;
```

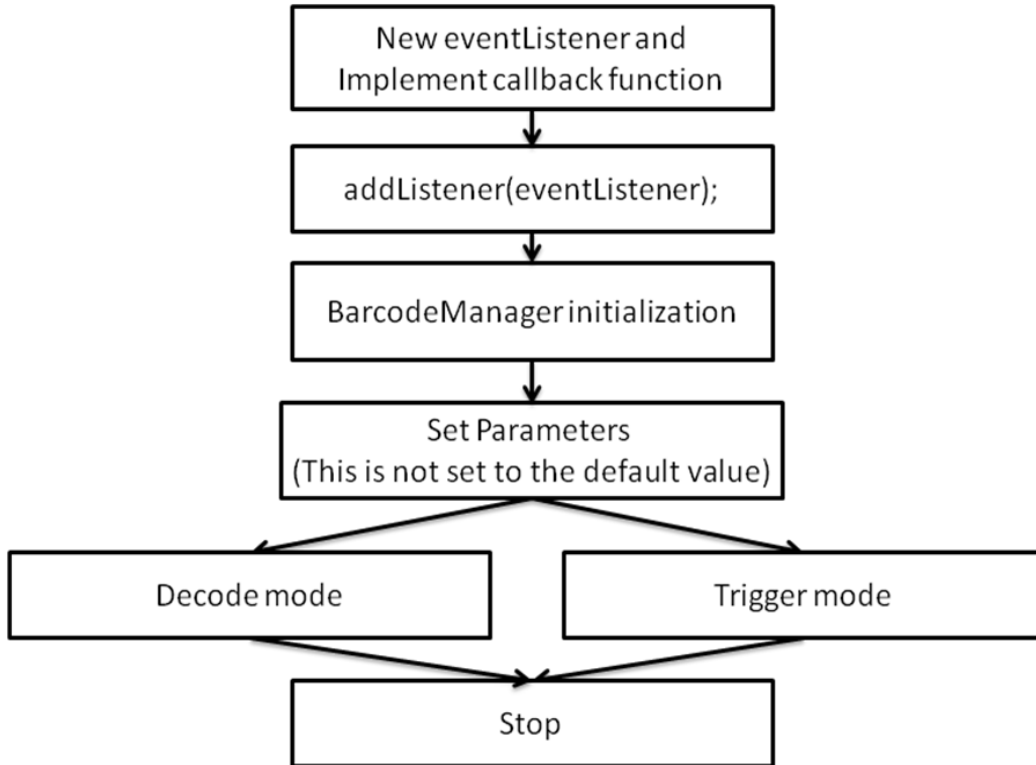
```
public static final int UK_Plessey           = 90;
public static final int Code_128           = 91;
public static final int Code_93           = 92;
public static final int Code_11           = 93;
public static final int Korean_Postal     = 94;
public static final int Intelligent_Mail  = 95;
public static final int POSTNET           = 96;
public static final int GS1_Databar       = 97;
public static final int CC_A              = 98;
public static final int CC_B              = 99;
public static final int CC_C              = 100;
public static final int Codablock_F       = 101;
public static final int DataMatrix         = 102;
public static final int Aztec              = 103;
public static final int Chinese_Sensible  = 104;
public static final int QR_code           = 105;
public static final int Micro_QR_Code     = 106;
public static final int Maxi_Code         = 107;
public static final int MicroPDF417       = 108;
```

## 4. Opticon barcode scanner SDK workflow

This section will introduce the decode workflow.

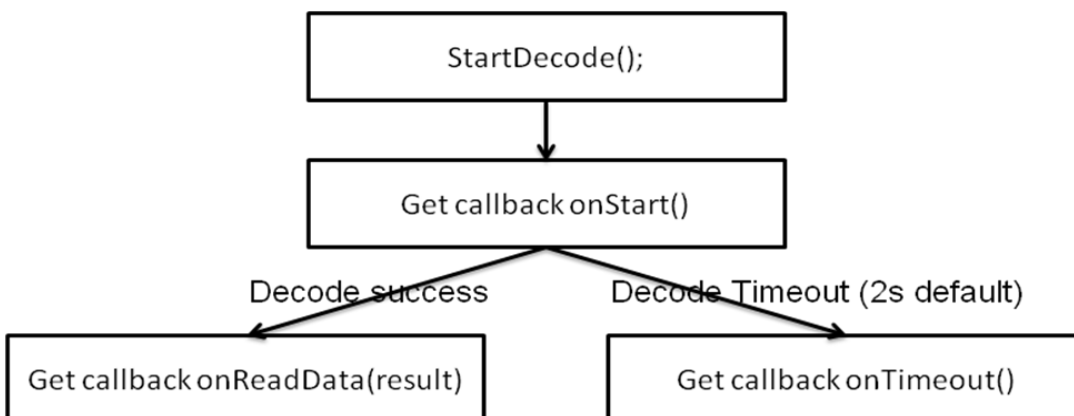
Opticon barcode scanner SDK provides two decode modes; decode mode and trigger mode.

User needs to implement callback function and initialize BarcodeManager then can start decode.



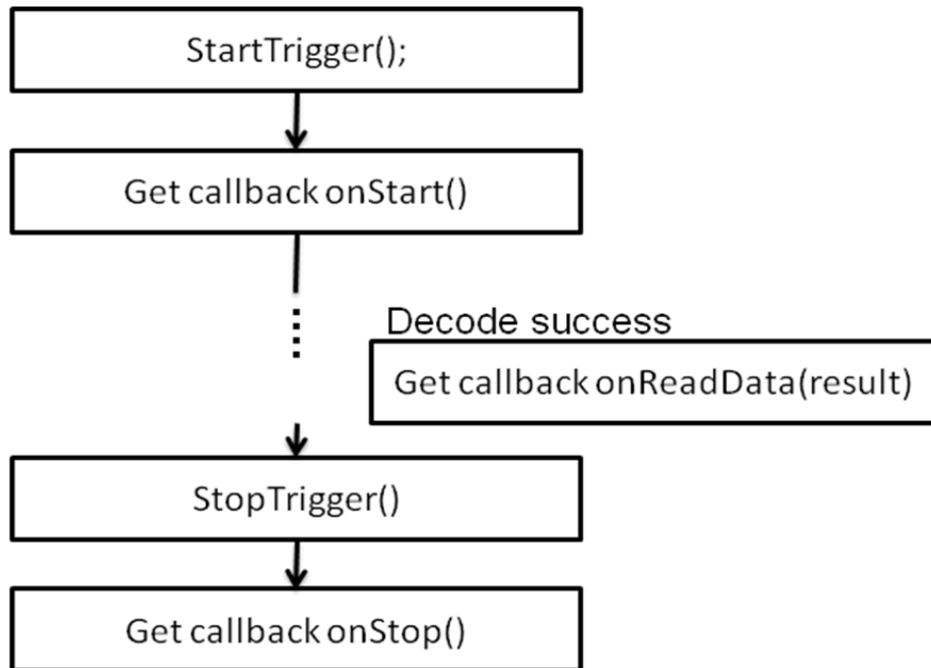
### 4.1. Decode mode

Decode mode only scan once until timeout, the default timeout is 2 sec. This means if your decode process is not success, it will auto stop and get the callback function. You can also manual stop by call StopDecode() function.



## 4.2. Trigger Mode

If you start trigger mode, it will keep to decode until you call StopTrigger(). If decode success, you will get onData() callback.



## 4.3. Setting Parameters

All barcode settings need to set by the AllSettings class, the detail API showed below.

When you use the settings function, you need to init the BarcodeManager.

Until the Service callback connect() is called, you can start setting.

### 4.3.1. AllSettings

```

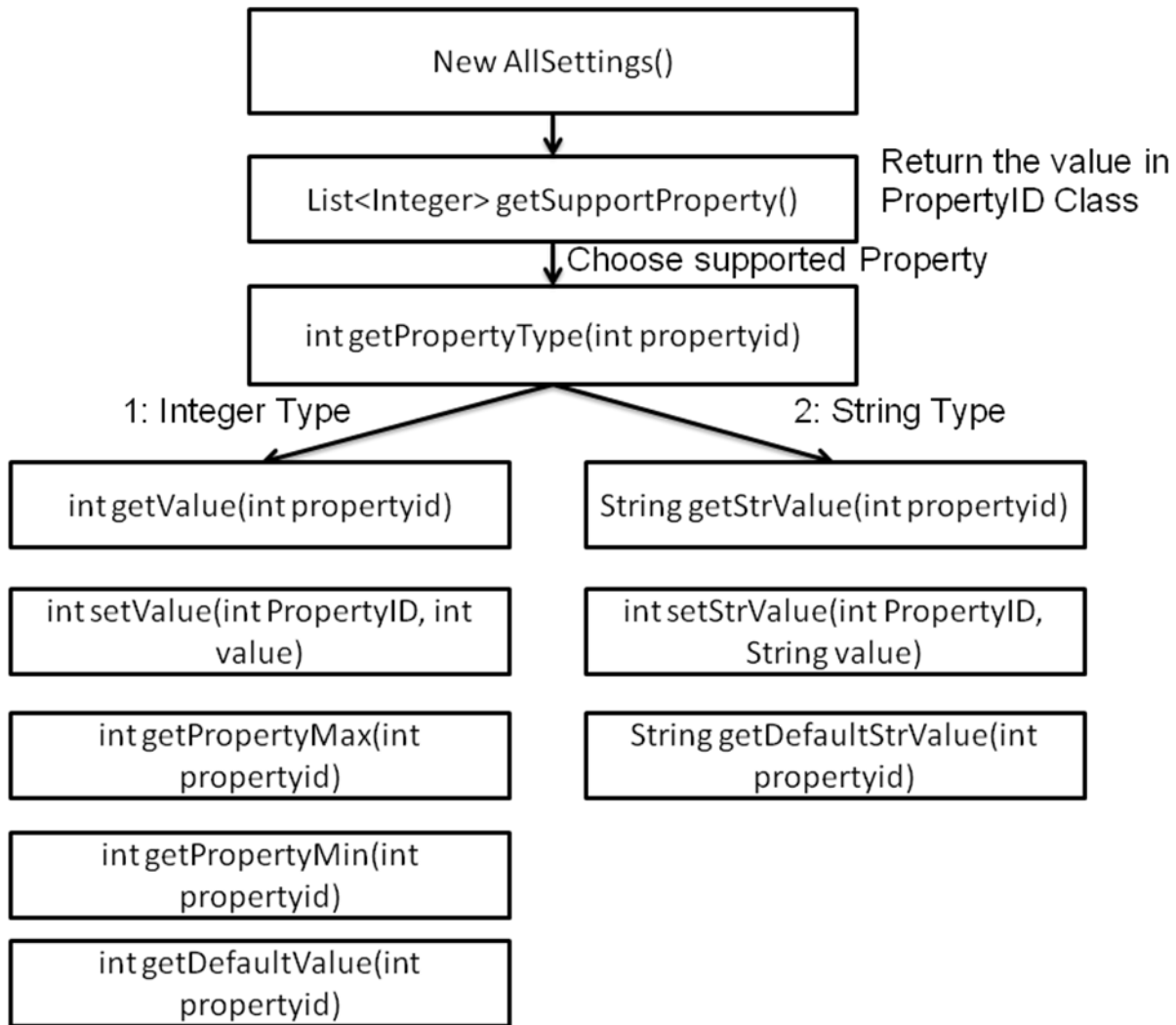
class AllSettings{
    List<Integer> getSupportProperty();
    int getPropertyType(int propertyid);
    int getPropertyMax(int propertyid);
    int getPropertyMin(int propertyid);
    int getValue(int propertyid);
    String getStrValue(int propertyid);
  
```

```

int setValue(int PropertyID, int value);
int setStrValue(int PropertyID, String value);
int getDefaultValue(int propertyid);
String getDefaultStrValue(int propertyid);
}

```

Function	Description
List<Integer> getSupportProperty()	Return supported property in PropertyID class.
int getPropertyType(int PropertyID)	Return the Property Type. 1 is Integer value, 2 is String value.
int getValue(int PropertyID)	Get the integer property value.
int getPropertyMax(int PropertyID)	Get the maximum value of property.
int getPropertyMin(int PropertyID)	Get the minimum value of property.
int setValue(int PropertyID, int value)	Set the integer property value.
String getStrValue(int PropertyID)	Get the string property value.
int setStrValue(int PropertyID, String value)	Set the string property value.
int getDefaultValue(int propertyid)	Get the default integer property value.
String getDefaultStrValue(int propertyid)	Get the default string property value.



#### 4.3.2. PropertyID

```

public class PropertyID {
    public static final int SCANKEY_ENABLE = 0x0000;
    public static final int INPUTKEY_ENABLE = 0x0002;
    public static final int INPUTKEY_TYPE = 0x000A;
    public static final int GOODREAD_ENABLE = 0x0010;
    public static final int GOODREAD_LED_ENABLE = 0x0012;
    public static final int GOODREAD_VIBRATOR_ENABLE = 0x0013;
    public static final int GOODREAD_AUDIO_ENABLE = 0x0014;
    public static final int GOODREAD_BEEPPER_FRQ = 0x0015;
    public static final int GOODREAD_DURATION = 0x0016;
    public static final int GOODREAD_TOASTMSG_ENABLE = 0x0017;
    public static final int FORMATING_PREFIX = 0x0021;
    public static final int FORMATING_SUFFIX = 0x0022;
}
  
```

```
public static final int FORMATING_REMOVE_NONPRINT = 0x0024;
public static final int FORMATING_NONPRINT_READABLE = 0x0025;
public static final int FORMATING_GS_REPLACE = 0x0026;
public static final int FORMATING_OPTICON_ID = 0x0027;
public static final int FORMATING_AIM_ID = 0x0028;
public static final int WEDGE_INTENT_ENABLE = 0x0030;
public static final int WEDGE_INTENT_DELIVERY_MODE = 0x0031;
public static final int WEDGE_INTENT_ACTION = 0x0032;
public static final int WEDGE_INTENT_CATEGORY = 0x0033;
public static final int WEDGE_INTENT_BARCODETYPE = 0x0034;
public static final int WEDGE_INTENT_BARCODEDATA = 0x0035;

public static final int READ_MODE = 0x0071;
public static final int READ_TIME = 0x0072;
public static final int MARGIN_CHECK = 0x0073;
public static final int REDUNDANCY = 0x0074;
public static final int NEGATIVE_BARCODE = 0x0075;
public static final int TRIGGER_REPEAT = 0x0076;
public static final int DECODE_COMMAND = 0x0077;
public static final int CENTRAL_READING = 0x0004;
public static final int AIMER_MODE = 0x0008;
public static final int CAMERA_ILLUMINATION_MODE = 0x0009;

public static final int CODE39_ENABLE = 0x0100;
public static final int CODE39_LENGTH1 = 0x0101;
public static final int CODE39_LENGTH2 = 0x0102;
public static final int CODE39_LENGTH_CONTROL = 0x0103;
public static final int CODE39_MODE = 0x0121;
public static final int CODE39_CONCATENATION_ENABLE = 0x0122;
public static final int CODE39_STSP_TRANSMISSION = 0x0123;
public static final int CODE39_CHECK_DIGIT = 0x0104;
public static final int CODE39_CD_TRANSMISSION = 0x0105;

public static final int INDUSTRIAL_2OF5_ENABLE = 0x0200;
public static final int INDUSTRIAL_2OF5_LENGTH1 = 0x0201;
public static final int INDUSTRIAL_2OF5_LENGTH2 = 0x0202;
public static final int INDUSTRIAL_2OF5_LENGTH_CONTROL = 0x0203;
```

```
public static final int MATRIX_2OF5_ENABLE = 0x0300;
public static final int MATRIX_2OF5_LENGTH1 = 0x0301;
public static final int MATRIX_2OF5_LENGTH2 = 0x0302;
public static final int MATRIX_2OF5_LENGTH_CONTROL = 0x0303;

public static final int INTERLEAVED_2OF5_ENABLE = 0x0400;
public static final int INTERLEAVED_2OF5_LENGTH1 = 0x0401;
public static final int INTERLEAVED_2OF5_LENGTH2 = 0x0402;
public static final int INTERLEAVED_2OF5_LENGTH_CONTROL = 0x0403;

public static final int CODABAR_ENABLE = 0x0500;
public static final int CODABAR_LENGTH1 = 0x0501;
public static final int CODABAR_LENGTH2 = 0x0502;
public static final int CODABAR_LENGTH_CONTROL = 0x0503;
public static final int CODABAR_MODE = 0x0521;
public static final int CODABAR_SPACE_INSERTION = 0x0505;
public static final int CODABAR_CHECK_DIGIT = 0x0504;
public static final int CODABAR_CD_TRANSMISSION = 0x0507;
public static final int CODABAR_STSP_TRANSMISSION = 0x0506;

public static final int CODE93_ENABLE = 0x0600;
public static final int CODE93_LENGTH1 = 0x0601;
public static final int CODE93_LENGTH2 = 0x0602;
public static final int CODE93_LENGTH_CONTROL = 0x0603;
public static final int CODE93_CHECK_DIGIT = 0x0604;

public static final int CODE128_ENABLE = 0x0700;
public static final int CODE128_LENGTH1 = 0x0701;
public static final int CODE128_LENGTH2 = 0x0702;
public static final int CODE128_LENGTH_CONTROL = 0x0703;
public static final int CODE128_CONCATENATION_ENABLE = 0x0722;

public static final int UPCA_ENABLE = 0x0800;
public static final int UPCA_LEADING_ZERO = 0x0803;
public static final int UPCA_CD_TRANSMISSION = 0x0802;
public static final int UPCA_EXT_ENABLE_2_DIGIT = 0x0821;
public static final int UPCA_EXT_ENABLE_5_DIGIT = 0x0822;
public static final int UPCA_EXT_ENABLE_EXT_DIGIT = 0x0823;
```



```
public static final int UPCE_ENABLE = 0x0900;
public static final int UPCE_LEADING_ZERO = 0x0903;
public static final int UPCE_CD_TRANSMISSION = 0x0902;
public static final int UPCE_EXT_ENABLE_2_DIGIT = 0x0921;
public static final int UPCE_EXT_ENABLE_5_DIGIT = 0x0922;
public static final int UPCE_EXT_ENABLE_EXT_DIGIT = 0x0923;

public static final int EAN13_ENABLE = 0x0a00;
public static final int EAN13_CD_TRANSMISSION = 0x0a01;
public static final int EAN13_EXT_ENABLE_2_DIGIT = 0x0a21;
public static final int EAN13_EXT_ENABLE_5_DIGIT = 0x0a22;
public static final int EAN13_EXT_ENABLE_EXT_DIGIT = 0x0a23;

public static final int EAN8_ENABLE = 0x0b00;
public static final int EAN8_CD_TRANSMISSION = 0x0b01;
public static final int EAN8_EXT_ENABLE_2_DIGIT = 0x0b21;
public static final int EAN8_EXT_ENABLE_5_DIGIT = 0x0b22;
public static final int EAN8_EXT_ENABLE_EXT_DIGIT = 0x0b23;

public static final int MSI_PLESSEY_ENABLE = 0x0c00;
public static final int MSI_PLESSEY_LENGTH1 = 0x0c01;
public static final int MSI_PLESSEY_LENGTH2 = 0x0c02;
public static final int MSI_PLESSEY_LENGTH_CONTROL = 0x0c03;
public static final int MSI_PLESSEY_CHECK_DIGIT = 0x0c04;
public static final int MSI_PLESSEY_CD_TRANSMISSION = 0x0c06;

public static final int GS1_DATABAR_ENABLE = 0x0d00;
public static final int GS1_DATABAR_LENGTH1 = 0x0d01;
public static final int GS1_DATABAR_LENGTH2 = 0x0d02;
public static final int GS1_DATABAR_LENGTH_CONTROL = 0x0d03;
public static final int GS1_DATABAR_AI_TRANSMISSION = 0x0d21;
public static final int GS1_DATABAR_CD_TRANSMISSION = 0x0d22;

public static final int GS1_DATABAR_LIMITED_ENABLE = 0x0e00;

public static final int GS1_DATABAR_EXPANDED_ENABLE = 0x0f00;
```

```
public static final int PDF417_ENABLE = 0x1000;
public static final int PDF417_LENGTH1 = 0x1001;
public static final int PDF417_LENGTH2 = 0x1002;
public static final int PDF417_LENGTH_CONTROL = 0x1003;

public static final int DATAMATRIX_LENGTH1 = 0x1101;
public static final int DATAMATRIX_LENGTH2 = 0x1102;
public static final int DATAMATRIX_LENGTH_CONTROL = 0x1103;
public static final int DATAMATRIX_ECC200_ENABLE = 0x1121;

public static final int MAXICODE_ENABLE = 0x1200;
public static final int MAXICODE_LENGTH1 = 0x1201;
public static final int MAXICODE_LENGTH2 = 0x1202;
public static final int MAXICODE_LENGTH_CONTROL = 0x1203;

public static final int TRIOPTIC_ENABLE = 0x1300;

public static final int MICRO_PDF417_ENABLE = 0x1500;
public static final int MICRO_PDF417_LENGTH1 = 0x1501;
public static final int MICRO_PDF417_LENGTH2 = 0x1502;
public static final int MICRO_PDF417_LENGTH_CONTROL = 0x1503;

public static final int QR_CODE_ENABLE = 0x1600;
public static final int QR_CODE_LENGTH1 = 0x1601;
public static final int QR_CODE_LENGTH2 = 0x1602;
public static final int QR_CODE_LENGTH_CONTROL = 0x1603;

public static final int AZTEC_ENABLE = 0x1700;
public static final int AZTEC_LENGTH1 = 0x1701;
public static final int AZTEC_LENGTH2 = 0x1702;
public static final int AZTEC_LENGTH_CONTROL = 0x1703;
public static final int AZTEC_RUNES_ENABLE = 0x1721;

public static final int PLANET_ENABLE = 0x1800;

public static final int POSTNET_ENABLE = 0x1900;
```

```
public static final int MAILMARK_4_STATE_POSTAL_ENABLE           = 0x1a00;
public static final int INTELLIGENT_MAIL_BARCODE_ENABLE          = 0x1a21;

public static final int UK_POSTAL_ENABLE                          = 0x1b00;
public static final int AUSTRALIAN_POSTAL_ENABLE                 = 0x1c00;
public static final int NETHERLANDS_KIX_CODE_ENABLE             = 0x1d00;
public static final int JPN_POSTAL_ENABLE                        = 0x1e00;

public static final int GS1_128_LENGTH1                          = 0x1f01;
public static final int GS1_128_LENGTH2                          = 0x1f02;
public static final int GS1_128_LENGTH_CONTROL                   = 0x1f03;

public static final int MICRO_QR_CODE_ENABLE                     = 0x2000;

public static final int UPCE1_ENABLE                              = 0x2100;

public static final int KOREAN_POSTAL_AUTHORITY_ENABLE           = 0x2200;
public static final int KOREAN_POSTAL_AUTHORITY_CD_TRANSMISSION = 0x2221;

public static final int CODE11_ENABLE                             = 0x2300;
public static final int CODE11_LENGTH1                           = 0x2301;
public static final int CODE11_LENGTH2                           = 0x2302;
public static final int CODE11_LENGTH_CONTROL                     = 0x2303;
public static final int CODE11_CHECK_DIGIT                       = 0x2304;
public static final int CODE11_CD_TRANSMISSION                   = 0x2305;

public static final int CODE_2OF5_CHECK_DIGIT                    = 0x3221;
public static final int CODE_2OF5_CD_TRANSMISSION                = 0x3222;

public static final int SCODE_ENABLE                              = 0x3300;
public static final int SCODE_LENGTH1                            = 0x3301;
public static final int SCODE_LENGTH2                            = 0x3302;
public static final int SCODE_LENGTH_CONTROL                     = 0x3303;

public static final int CHINESE_POST_MATRIX_2OF5_ENABLE          = 0x3400;

public static final int IATA_ENABLE                               = 0x3500;
public static final int IATA_LENGTH1                             = 0x3501;
```

```
public static final int IATA_LENGTH2 = 0x3502;
public static final int IATA_LENGTH_CONTROL = 0x3503;
public static final int IATA_CHECK_DIGIT = 0x3504;
public static final int IATA_CD_TRANSMISSION = 0x3505;

public static final int TELEPEN_ENABLE = 0x3600;
public static final int TELEPEN_LENGTH1 = 0x3601;
public static final int TELEPEN_LENGTH2 = 0x3602;
public static final int TELEPEN_LENGTH_CONTROL = 0x3603;
public static final int TELEPEN_MODE = 0x3604;

public static final int UK_PLESSEY_ENABLE = 0x3700;
public static final int UK_PLESSEY_LENGTH1 = 0x3701;
public static final int UK_PLESSEY_LENGTH2 = 0x3702;
public static final int UK_PLESSEY_LENGTH_CONTROL = 0x3703;
public static final int UK_PLESSEY_CD_TRANSMISSION = 0x3704;

public static final int CODABLOCK_F_ENABLE = 0x3800;
public static final int CODABLOCK_F_LENGTH1 = 0x3801;
public static final int CODABLOCK_F_LENGTH2 = 0x3802;
public static final int CODABLOCK_F_LENGTH_CONTROL = 0x3803;

public static final int COMPOSITE_GS1_ENABLE = 0x3900;
public static final int COMPOSITE_LENGTH1 = 0x3901;
public static final int COMPOSITE_LENGTH2 = 0x3902;
public static final int COMPOSITE_LENGTH_CONTROL = 0x3903;
public static final int COMPOSITE_EAN_UPA_ENABLE = 0x3904;
public static final int COMPOSITE_LINK_FLAG = 0x3905;
public static final int COMPOSITE_OUTPUT_MODE = 0x3906;

public static final int CHINESE_SENSIBLE_CODE_ENABLE = 0x3a00;
public static final int CHINESE_SENSIBLE_CODE_LENGTH1 = 0x3a01;
public static final int CHINESE_SENSIBLE_CODE_LENGTH2 = 0x3a02;
public static final int CHINESE_SENSIBLE_CODE_LENGTH_CONTROL = 0x3a03;
}
```

PropertyID	Description
SCANKEY_ENABLE	Enable the scankey to scan.
INPUTKEY_ENABLE	Scan result change to input event.
INPUTKEY_TYPE	The type of input event. 0. is use Input Method Service to send data, like copy and paste. 1. is use Input keyevent to send data.
GOODREAD_ENABLE	Enable Good read function.
GOODREAD_LED_ENABLE	Good read function, LED will affect between scan.
GOODREAD_VIBRATOR_ENABLE	Good read function, vibrator will run after decode success.
GOODREAD_AUDIO_ENABLE	Good read function, it will beep after decode success.
GOODREAD_BEEPPER_FRQ	Beeper audio frequency.
GOODREAD_DURATION	Duration of Good read.
GOODREAD_TOASTMSG_ENABLE	Good read function, it will toast message after decode success.
FORMATING_PREFIX	Prefix of the decode result.
FORMATING_SUFFIX	Suffix of the decode result.
FORMATING_REMOVE_NONPRINT	Remove the-non print words of decode result.
FORMATING_NONPRINT_READABLE	Change the non-print word to readable words.
FORMATING_GS_REPLACE	Replace GS word for the word you want.
FORMATING_OPTICON_ID	Add Opticon ID before decode result.
FORMATING_AIM_ID	Add AIM ID before decode result.
WEDGE_INTENT_ENABLE	Enable the intent to send the decode result.
WEDGE_INTENT_DELIVERY_MODE	Three mode, Send Intent via StartActivity = 0. Send Intent via startService = 1 Broadcast intent = 2
WEDGE_INTENT_ACTION	Intent action
WEDGE_INTENT_CATEGORY	Intent category
WEDGE_INTENT_BARCODETYPE	Intent extra data to send decode type
WEDGE_INTENT_BARCODEDATA	Intent extra data to send decode data
READ_MODE	READMODE_SINGLE            0 READMODE_MULTIPLE        1
READ_TIME	Definition of read time from 0~9 second, and infinity time.
MARGIN_CHECK	From non-check, 1/7, 2/7, 3/7, 4/7, 5/7, 6/7, normal check.
REDUNDANCY	From Read 1 time to Read 9 times.

NEGATIVE_BARCODE	Positive and negative bar codes.
TRIGGER_REPEAT	Enable trigger repeat function.
DECODE_COMMAND	Send Command to the decode library.
CENTRAL_READING	Enable Central reading function.
AIMER_MODE	AIMER ON/OFF
CAMERA_ILLUMINATION_MODE	CAMERA_LED_MODE_ENABLE      1 CAMERA_LED_MODE_DISABLE      2 CAMERA_LED_MODE_ALTERNATIVE      3 CAMERA_LED_MODE_MIRROR_REFLECTION 4
CODE39_ENABLE	Enable Code39
CODE39_LENGTH1	Code39 Length1
CODE39_LENGTH2	Code39 Length2
CODE39_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
CODE39_MODE	NORMAL_CODE39                      1 CODE39_FULLASCII                      2 CODE39_FULLASCII_IF_POSSIBLE      3 ITALIAN_PHARM_ONLY                      4 ITALIAN_PHARM_IF_POSSIBLE              5
CODE39_CONCATENATION_ENABLE	Enable concatenation.
CODE39_STSP_TRANSMISSION	Send Start and stop charactor.
CODE39_CHECK_DIGIT	Enable Code39 check digit
CODE39_CD_TRANSMISSION	Send Code39 check digit
INDUSTRIAL_2OF5_ENABLE	Enable Industrial 2 of 5
INDUSTRIAL_2OF5_LENGTH1	Industrial 2 of 5 Length1
INDUSTRIAL_2OF5_LENGTH2	Industrial 2 of 5 Length2
INDUSTRIAL_2OF5_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
MATRIX_2OF5_ENABLE	Enable Matrix 2 of 5
MATRIX_2OF5_LENGTH1	Matrix 2 of 5 Length1
MATRIX_2OF5_LENGTH2	Matrix 2 of 5 Length2

MATRIX_2OF5_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
INTERLEAVED_2OF5_ENABLE	Enable Interleaved 2 of 5
INTERLEAVED_2OF5_LENGTH1	Interleaved 2 of 5 Length1
INTERLEAVED_2OF5_LENGTH2	Interleaved 2 of 5 Length1
INTERLEAVED_2OF5_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
CODABAR_ENABLE	Enable Codabar
CODABAR_LENGTH1	Codabar Length1
CODABAR_LENGTH2	Codabar Length2
CODABAR_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
CODABAR_MODE	CODABAR_NORMAL 6 ABC_CODE_ONLY 7 CX_CODE_ONLY 8 CODABAR_ABC_CX 9
CODABAR_SPACE_INSERTION	This option inserts spaces in position 2, 7, 13, of the data string for use in library systems.
CODABAR_CHECK_DIGIT	Enable Codabar check digit
CODABAR_CD_TRANSMISSION	Send Codabar check digit
CODABAR_STSP_TRANSMISSION	NOT_TRANSMIT_STSP 2 STSP_ABCD 3 STSP_abcd 4 STSP_ABCD_TN_E 5 STSP_abcd_tn_e 6 STSP_DC1DC2DC3DC4 7
CODE93_ENABLE	Enable Code93
CODE93_LENGTH1	Code93 Length1
CODE93_LENGTH2	Code93 Length2
CODE93_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3

CODE93_CHECK_DIGIT	Enable Code93 check digit.
CODE128_ENABLE	Enable Code128
CODE128_LENGTH1	Code128 Length1
CODE128_LENGTH2	Code128 Length2
CODE128_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
CODE128_CONCATENATION_ENABLE	Enable Code128 concatenation.
UPCA_ENABLE	Enable UPCA
UPCA_LEADING_ZERO	Send leading zero.
UPCA_CD_TRANSMISSION	Send check digit.
UPCA_EXT_ENABLE_2_DIGIT	Enable UPCA add-on 2.
UPCA_EXT_ENABLE_5_DIGIT	Enable UPCA add-on 5.
UPCA_EXT_ENABLE_EXT_DIGIT	Only decode when UPCA has add-on.
UPCE_ENABLE	Enable UPCE
UPCE_LEADING_ZERO	Send leading zero
UPCE_CD_TRANSMISSION	Send check digit.
UPCE_EXT_ENABLE_2_DIGIT	Enable UPCE add-on 2
UPCE_EXT_ENABLE_5_DIGIT	Enable UPCE add-on 5
UPCE_EXT_ENABLE_EXT_DIGIT	Only decode when UPCE has add-on.
EAN13_ENABLE	Enable Ean13
EAN13_CD_TRANSMISSION	Send check digit
EAN13_EXT_ENABLE_2_DIGIT	Enable Ean13 add-on 2
EAN13_EXT_ENABLE_5_DIGIT	Enable Ean13 add-on 5
EAN13_EXT_ENABLE_EXT_DIGIT	Only decode when Ean13 has add-on.
EAN8_ENABLE	Enable Ean8
EAN8_CD_TRANSMISSION	Send check digit
EAN8_EXT_ENABLE_2_DIGIT	Enable Ean8 add-on 2
EAN8_EXT_ENABLE_5_DIGIT	Enable Ean8 add-on 5
EAN8_EXT_ENABLE_EXT_DIGIT	Only decode when Ean8 has add-on.



MSI_PLESSEY_ENABLE	Enable MSI/Plessey												
MSI_PLESSEY_LENGTH1	MSI/Plessey Length1												
MSI_PLESSEY_LENGTH2	MSI/Plessey Length2												
MSI_PLESSEY_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3												
MSI_PLESSEY_CHECK_DIGIT	<table border="0"> <tr> <td>NOT_CHECK_DIGIT</td> <td>5</td> </tr> <tr> <td>MSI_PLESSEY_1CD_MOD10</td> <td>6</td> </tr> <tr> <td>MSI_PLESSEY_MOD10_MOD10</td> <td>7</td> </tr> <tr> <td>MSI_PLESSEY_MOD10_MOD11</td> <td>8</td> </tr> <tr> <td>MSI_PLESSEY_MOD11_MOD10</td> <td>9</td> </tr> <tr> <td>MSI_PLESSEY_MOD11_MOD11</td> <td>10</td> </tr> </table>	NOT_CHECK_DIGIT	5	MSI_PLESSEY_1CD_MOD10	6	MSI_PLESSEY_MOD10_MOD10	7	MSI_PLESSEY_MOD10_MOD11	8	MSI_PLESSEY_MOD11_MOD10	9	MSI_PLESSEY_MOD11_MOD11	10
NOT_CHECK_DIGIT	5												
MSI_PLESSEY_1CD_MOD10	6												
MSI_PLESSEY_MOD10_MOD10	7												
MSI_PLESSEY_MOD10_MOD11	8												
MSI_PLESSEY_MOD11_MOD10	9												
MSI_PLESSEY_MOD11_MOD11	10												
MSI_PLESSEY_CD_TRANSMISSION	<table border="0"> <tr> <td>NOT_TRANSMIT_CD</td> <td>0</td> </tr> <tr> <td>TRANSMIT_CD1</td> <td>1</td> </tr> <tr> <td>TRANSMIT_CD1_CD2</td> <td>2</td> </tr> </table>	NOT_TRANSMIT_CD	0	TRANSMIT_CD1	1	TRANSMIT_CD1_CD2	2						
NOT_TRANSMIT_CD	0												
TRANSMIT_CD1	1												
TRANSMIT_CD1_CD2	2												
GS1_DATABAR_ENABLE	Enable GS1 DataBar												
GS1_DATABAR_LENGTH1	GS1 DataBar Length1												
GS1_DATABAR_LENGTH2	GS1 DataBar Length2												
GS1_DATABAR_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3												
GS1_DATABAR_AI_TRANSMISSION	Transmission application ID												
GS1_DATABAR_CD_TRANSMISSION	Transmission check digit												
GS1_DATABAR_LIMITED_ENABLE	Enable GS1 DataBar Limited												
GS1_DATABAR_EXPANDED_ENABLE	Enable GS1 DataBar Expanded												
PDF417_ENABLE	Enable PDF417												
PDF417_LENGTH1	PDF417 Length1												
PDF417_LENGTH2	PDF417 Length2												
PDF417_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3												
DATAMATRIX_ECC200_ENABLE	Enable Datamatrix ECC200												
DATAMATRIX_LENGTH1	Datamatrix Length1												
DATAMATRIX_LENGTH2	Datamatrix Length2												

DATAMATRIX_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
MAXICODE_ENABLE	Enable Maxicode
MAXICODE_LENGTH1	Maxicode Length1
MAXICODE_LENGTH2	Maxicode Length2
MAXICODE_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
TRIOPTIC_ENABLE	Enable Trioptic
MICRO_PDF417_ENABLE	Enable Micropdf417
MICRO_PDF417_LENGTH1	Micropdf417 Length1
MICRO_PDF417_LENGTH2	Micropdf417 Length2
MICRO_PDF417_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
QR_CODE_ENABLE	Enable Qrcode
QR_CODE_LENGTH1	Qrcode Length1
QR_CODE_LENGTH2	Qrcode Length2
QR_CODE_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
AZTEC_ENABLE	Enable Aztec
AZTEC_LENGTH1	Aztec Length1
AZTEC_LENGTH2	Aztec Length2
AZTEC_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
AZTEC_RUNES_ENABLE	Enable Aztec Runes
PLANET_ENABLE	Enable Postal Planet
POSTNET_ENABLE	Enable Postal Postnet

MAILMARK_4_STATE_POSTAL_ENABLE	Enable Mailmark 4state postal								
INTELLIGENT_MAIL_BARCODE_ENABLE	Enable Intelligent Mail								
UK_POSTAL_ENABLE	Enable UK postal Mail								
AUSTRALIAN_POSTAL_ENABLE	Enable Australia Post								
NETHERLANDS_KIX_CODE_ENABLE	Enable KIX-code								
JPN_POSTAL_ENABLE	Enable Japan Post								
GS1_128_LENGTH1	GS1-128 Length1								
GS1_128_LENGTH2	GS1-128 Length2								
GS1_128_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
MICRO_QR_CODE_ENABLE	Enable MicroQR code								
UPCE1_ENABLE	Enable UPCE1								
KOREAN_POSTAL_AUTHORITY_ENABLE	Enable Korean postal								
KOREAN_POSTAL_AUTHORITY_CD_TRANSMISSION	Send check digit								
CODE11_ENABLE	Enable Code11								
CODE11_LENGTH1	Code11 Length1								
CODE11_LENGTH2	Code11 Length2								
CODE11_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
CODE11_CHECK_DIGIT	<table border="0"> <tr> <td>NOT_CHECK_DIGIT</td> <td>9</td> </tr> <tr> <td>CODE11_CHECK_1CD</td> <td>0xA</td> </tr> <tr> <td>CODE11_CHECK_2CD</td> <td>0xB</td> </tr> <tr> <td>CHECK_DIGIT_AUTO</td> <td>0xC</td> </tr> </table>	NOT_CHECK_DIGIT	9	CODE11_CHECK_1CD	0xA	CODE11_CHECK_2CD	0xB	CHECK_DIGIT_AUTO	0xC
NOT_CHECK_DIGIT	9								
CODE11_CHECK_1CD	0xA								
CODE11_CHECK_2CD	0xB								
CHECK_DIGIT_AUTO	0xC								
CODE11_CD_TRANSMISSION	Send check digit								
CODE_2OF5_CHECK_DIGIT	Enable all 2 of 5 barcode check digit								
CODE_2OF5_CD_TRANSMISSION	Send all 2 of 5 barcode check digit								
SCODE_ENABLE	Enable Scode								

SCODE_LENGTH1	Scode Length1								
SCODE_LENGTH2	Scode Length2								
SCODE_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
CHINESE_POST_MATRIX_2OF5_ENABLE	Enable Chinese post matrix 2 of 5								
IATA_ENABLE	Enable IATA								
IATA_LENGTH1	IATA Length1								
IATA_LENGTH2	IATA Length2								
IATA_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
IATA_CHECK_DIGIT	<table border="0"> <tr> <td>NOT_CHECK_DIGIT</td> <td>2</td> </tr> <tr> <td>IATA_CHECK_FC_SN_ONLY</td> <td>3</td> </tr> <tr> <td>IATA_CHECK_CPN_FC_SN</td> <td>4</td> </tr> <tr> <td>IATA_CHECK_CPN_AC_FC_SN</td> <td>5</td> </tr> </table>	NOT_CHECK_DIGIT	2	IATA_CHECK_FC_SN_ONLY	3	IATA_CHECK_CPN_FC_SN	4	IATA_CHECK_CPN_AC_FC_SN	5
NOT_CHECK_DIGIT	2								
IATA_CHECK_FC_SN_ONLY	3								
IATA_CHECK_CPN_FC_SN	4								
IATA_CHECK_CPN_AC_FC_SN	5								
IATA_CD_TRANSMISSION	Send check digit								
TELEPEN_ENABLE	Enable Telepen								
TELEPEN_LENGTH1	Telepen Length1								
TELEPEN_LENGTH2	Telepen Length2								
TELEPEN_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
TELEPEN_MODE	<table border="0"> <tr> <td>TELEPEN_MODE_NUMERIC</td> <td>0xA</td> </tr> <tr> <td>TELEPEN_MODE_ASCII</td> <td>0xB</td> </tr> </table>	TELEPEN_MODE_NUMERIC	0xA	TELEPEN_MODE_ASCII	0xB				
TELEPEN_MODE_NUMERIC	0xA								
TELEPEN_MODE_ASCII	0xB								
UK_PLESSEY_ENABLE	Enable UK/Plessey								
UK_PLESSEY_LENGTH1	UK/Plessey Length1								
UK_PLESSEY_LENGTH2	UK/Plessey Length2								
UK_PLESSEY_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3								
UK_PLESSEY_CD_TRANSMISSION	Send check digit								

CODABLOCK_F_ENABLE	Enable Codablock F
CODABLOCK_F_LENGTH1	Codablock F Length1
CODABLOCK_F_LENGTH2	Codablock F Length2
CODABLOCK_F_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
COMPOSITE_GS1_ENABLE	Enable GS1 Composite
COMPOSITE_LENGTH1	Composite Length1
COMPOSITE_LENGTH2	Composite Length2
COMPOSITE_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3
COMPOSITE_EAN_UPA_ENABLE	Enable Ean/UPA Composite
COMPOSITE_LINK_FLAG	Enable Link flag of Composite
COMPOSITE_OUTPUT_MODE	OUTPUT_MODE_1D                    0 OUTPUT_MODE_2D                    1 OUTPUT_MODE_1D2D                2
CHINESE_SENSIBLE_CODE_ENABLE	Enable Chinese sensible code
CHINESE_SENSIBLE_CODE_LENGTH1	Chinese sensible code Length1
CHINESE_SENSIBLE_CODE_LENGTH2	Chinese sensible code Length2
CHINESE_SENSIBLE_CODE_LENGTH_CONTROL	Control Length1 and Length2 for no check, one fixed, two fixed or Range. No check = 0, One fixed = 1, Two fixed = 2, Range = 3

## 5. Sample Code

### 5.1. Barcode Scan APP



ScannerSDKSample.zip

Go to [www.opticon.com/H-28](http://www.opticon.com/H-28) to download the zip file.

Go to [www.opticon.com/H-29](http://www.opticon.com/H-29) to download the zip file.

### 5.2. Barcode Settings

```

mBarcodeManager = new BarcodeManager(this);
mBarcodeManager.init();
mEventListener = new EventListener() {
    @Override
    public void onReadData(BarcodeData result) {
        Log.e(TAG, "onReadData " + result.getText() + ", codeid is" +
result.getCodeID());
    }

    @Override
    public void onTimeout() {
        Log.e(TAG, "onTimeout");
    }

    @Override
    public void onConnect(){
        serverconnect = true;

        ///// this is for property setting sample /////
        AllSettings mSr = new AllSettings();
        List<Integer> Qrproperty = mSr.getSupportProperty();
        for (int i = 0; i < Qrproperty.size(); i++) {
            Log.e("AllSettings support Pro =" + Integer.toHexString(Qrproperty.get(i)) + "
type "+ mSr.getPropertyType(Qrproperty.get(i)) + "\n");
            if(mSr.getPropertyType(Qrproperty.get(i)) == 1)
                Log.e("ServiceSetting getValue =" + mSr.getValue(Qrproperty.get(i)) +
"\n");
        }
    }
}

```

```
        else if(mSr.getPropertyType(Qrproperty.get(i)) == 2)
            Log.e("ServiceSetting getStrValue =" +
mSr.getStrValue(Qrproperty.get(i)) + "\n");

    }

    mSr.setValue(PropertyID.GOODREAD_AUDIO_ENABLE, 1);
    mSr.setValue(PropertyID.GOODREAD_DURATION, 1000);
    mSr.setValue(PropertyID.GOODREAD_BEEPPER_FRQ, 2000);
    mSr.setStrValue(PropertyID.FORMATING_PREFIX, "!!!!");
    mSr.setStrValue(PropertyID.FORMATING_SUFFIX, "~~~~");
    mSr.setValue(PropertyID.GOODREAD_VIBRATOR_ENABLE, 1);
    mSr.setValue(PropertyID.GOODREAD_ENABLE, 1);

    ///// this is for property setting sample /////
}

@Override
public void onDisconnect(){
    Log.e(TAG, "onDisconnect");
    serverconnect = false;
}

@Override
public void onStart(){
    Log.e(TAG, "onStart");
}

@Override
public void onStop(){
    Log.e(TAG, "onStop");
}

};
mBarcodeManager.addListener(mEventListener);
```

## 6. Acronym

API - Application Programming Interface

SDK - Software Development Kit