

iOS SDK Users Guide



OPN2002i



OPN3002i

OPN2002i/OPN3002i Series

All information subject to change without notice.

Document History

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1.0	10/30/2012	—	New Document
1.1	2/8/2013	Cover	Added the OPN3002 Series
		3.1-3.4	Added OPN3002-Specific Setting items

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Forward

This document is primarily for aiding development of iOS applications that utilize the MFi-certified OPN2002i and OPN3002i data collectors. For details regarding use or technical information necessary for iOS development, please refer to reference documents that cover those subjects.

All details contained within this document pertain to both the OPN2002i and OPN3002i, excluding OPN3002i-Specific Settings, which apply only to the OPN3002i.

Explicit details regarding the API within SDK are not contained in this document. Please refer to "OPNBluetoothKit API Reference" for more information, or the API calls, parameters, etc.

1. Development Environment

1.1 Execution Environment

This SDK is intended for iOS 4.3 or higher.

1.2 Development Environment SDK-use Procedure

It is important to do the following when using the SDK:

- * Add the `OPNBluetoothKit.framework` & `ExternalAccessory.framework` into your iOS application project.
- * Add 'Supported external accessory protocols' to `Info.plist`, and specify `jp.opto.opnprotocol` as the value.

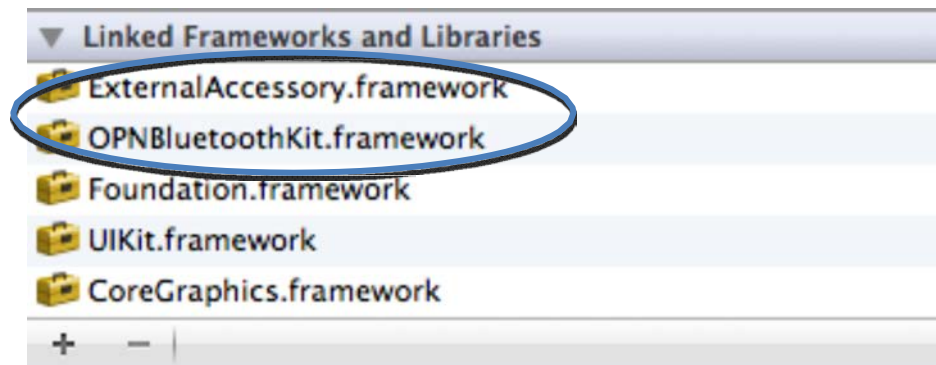
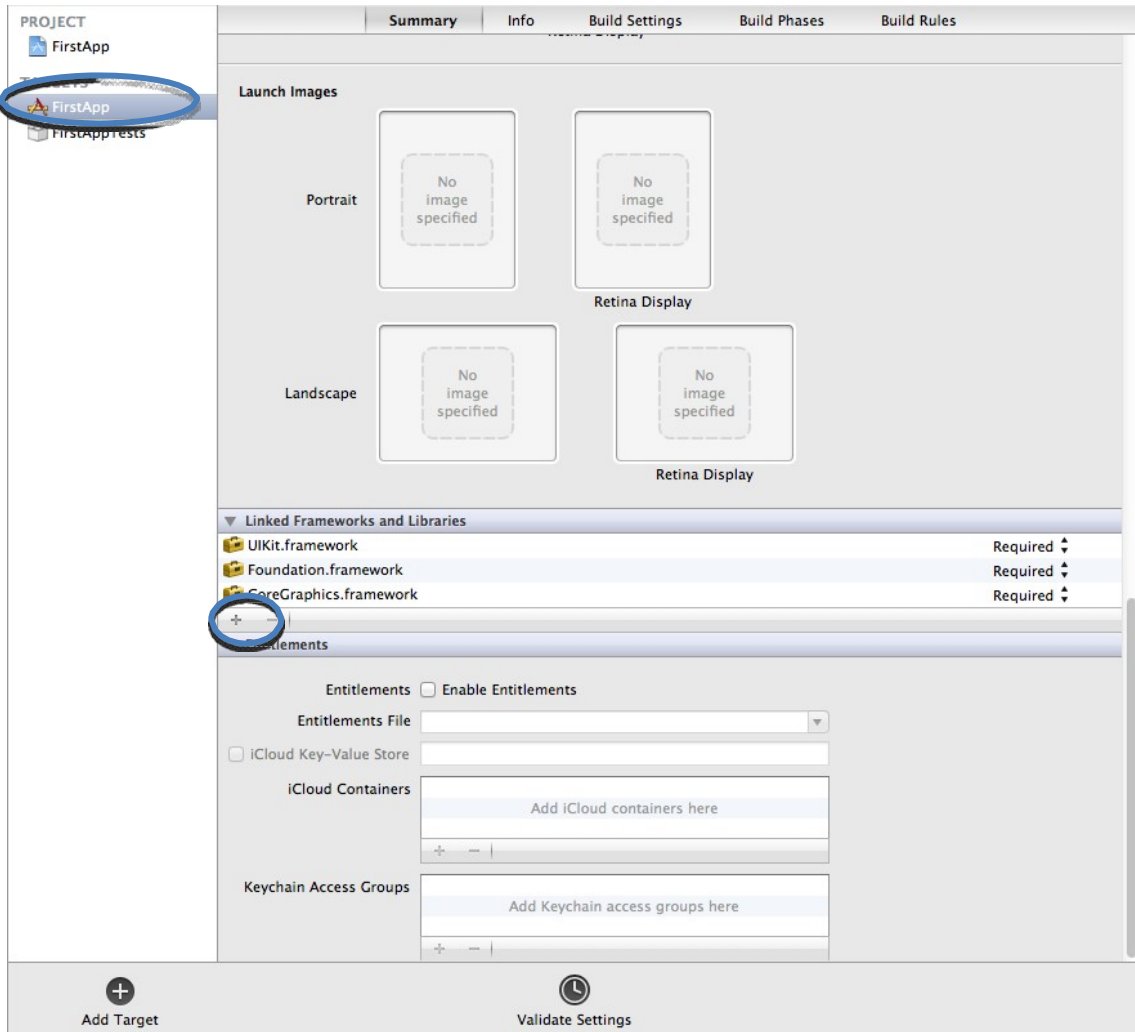
This guide operates under the following assumptions:

- The Xcode development environment is up to date and equipped to build iOS applications.
- The Xcode projects to utilize this SDK are already in a state of development.

This document explains the procedure for integrating and using the SDK, "FirstApp" as an example.

■ Adding the Frameworks into the Project

- ① Add both the SDK and the ExternalAccessory.framework as Linked Frameworks.



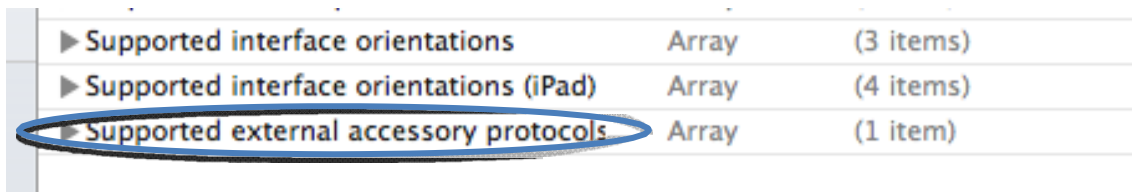
■ Adding “Supported external accessory protocols” to Info.plist

- ① Open the Info.plist from within your project.



Key	Type	Value
Localization native development region	String	en
Bundle display name	String	\$(PRODUCT_NAME)
Executable file	String	\$(EXECUTABLE_NAME)
Bundle identifier	String	jp.opto.{\$(PRODUCT_NAME:rfc1034identifier)}
InfoDictionary version	String	6.0
Bundle name	String	\$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle creator OS Type code	String	????
Bundle version	String	1.0
Application requires iPhone environment	Boolean	YES
Main storyboard file base name	String	MainStoryboard_iPhone
Main storyboard file base name (iPad)	String	MainStoryboard_iPad
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)

- ② Add the “Supported external accessory protocols” key.



▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)
▶ Supported external accessory protocols	Array	(1 item)

- ③ Specify the value as “jp.opto.opnprotocol”.



▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)
▼ Supported external accessory protocols	Array	(1 item)
Item 0	String	jp.opto.opnprotocol

2. API Usage

It is necessary to import the main API header file when using the framework.

```
#import <OPNBluetoothKit/OPN2002iBluetoothService.h>
```

The sample application FirstApp demonstrates how to use the API, along with the following section.

■ Generating/Capturing the OPN2002iBluetoothService

```
OPN2002iBluetoothService *sessionController =
    [OPN2002iBluetoothService sharedController];
```

All Bluetooth connections to the data collector are performed via the OPN2002iBluetooth Service. An instance of the service can be created from OPN2002iBluetoothService's sharedController () Method, which uses the Singleton design paradigm. Because only one instance may exist at a time during implementation, if the instance has not yet been created within the application it will be returned upon completion. If already created, then that instance will be returned immediately.

■ Connecting to the Data Collector

```
NSArray *accessoryList = [[NSMutableArray alloc] initWithArray:
    [[EAAccessoryManager sharedAccessoryManager]
        connectedAccessories]];

if(accessoryList == nil || accessoryList.count == 0) return;

EAAccessory *accessory = [accessoryList lastObject];

OPN2002iBluetoothService *service =
    [OPN2002iBluetoothService sharedController];

NSArray *protocolStrings = [accessory protocolStrings];
if(protocolStrings == nil || [protocolStrings count]==0) return;
NSString *protocolString = [protocolStrings objectAtIndex:0];

[service setupControllerForAccessory:accessory
    withProtocolString:protocolString];
```

Connect to the data collector by calling the OPN2002iBluetoothService's setupControllerForAccessory () method.

This sample connects by capturing the protocol character strings and accessories necessary to call the setupControllerForAccessory () method.

■ Opening the Session

```
OPN2002iBluetoothService *sessionController =
    [OPN2002iBluetoothService sharedController];
[sessionController openSession];
```

When already connected, the session may be opened by calling the `OPN2002iBluetoothService openSession ()` method.

■ Closing the Session

```
OPN2002iBluetoothService *sessionController =
    [OPN2002iBluetoothService sharedController];
[sessionController closeSession];
```

The session with the data collector may be closed by calling the `OPN2002iBluetoothService closeSession ()` method.

■ Running API Standard Commands

```
OPN2002iBluetoothService *service =
    [OPN2002iBluetoothService sharedController];
[service getFirmwareVersion:self];
```

There are commands pertaining to the data collector that are provided via the `OPN2002iBluetoothService` Class. The way in which these are called regularly is shown below:

- (void) Method Name:(id<`OPN2002iBluetoothServiceDelegate`>)delegate;

Within this sample the `OPN2002iBluetoothService` instance is captured, and the `getFirmwareVersion ()` method argument is passed, delegated as itself.

■ Running Other Commands

```
OPN2002iBluetoothService *service =
    [OPN2002iBluetoothService sharedController];
[service writeData:@"W8" dataCommand] target:self];
```

When issuing commands that are not explicitly part of the `OPN2002iBluetoothService` Class such as Universal Menu Commands, the `OPN2002iBluetoothService writeData ()` method is used instead. These are issued by specifying the delegate and command string to be sent, in the `writeData ()` argument.

In this sample, the `OPN2002iBluetoothService` instance is captured, and both the command string `dataCommand` and the delegate are passed to the `writeData ()` method as arguments.

For more details regarding usable commands, please refer to "3.5 Character String Settings".

■ Detecting Transmission Errors

```
@interface AppViewController <OPN2002iBluetoothServiceDelegate> {
}
```

In order to retrieve the result of commands between the `OPN2002iBluetoothService` and the data collector, Client code must adopt the `OPN2002iBluetoothServiceDelegate` Protocols. Within this sample, the `AppViewController` class adopts the appropriate protocols.

```
OPN2002iBluetoothService *sessionController =
    [OPN2002iBluetoothService sharedController];
[service setDelegate:self];
```

Next, the delegate for the `OPN2002iBluetoothService` is specified.

```
- (void)bluetoothService:(OPN2002iBluetoothService *)service
    withError:(NSError *)error
{
    NSLog(@"error: %@", error);
}
```

This method captures results and outputs them to the log.

■ Confirming Connection to the Data Collector

```
isConnected =
    [[[OPN2002iBluetoothService
    sharedController] accessory] isConnected];
```

It is possible to determine whether the `OPN2002iBluetoothService` is connected to the data collector or not via its `EAAccessory` `isConnected` property. If 'YES', then it is connected.

3. Command References

3.1 Decoder Settings

Setting Items	Parameters	Setting Value	Command
UPC-A/E Scanning	Enable	1	R1
	Disable	0	[X4B
UPC-A/E Addon2 Scanning	Enable	1	R2
	Disable	0	[X4C
UPC-A/E Addon5 Scanning	Enable	1	R3
	Disable	0	[X4D
JAN/EAN-13/8 Scanning	Approve	1	R4
	Disable	0	[X4E
JAN/EAN-13/8 Addon2 Scanning	Enable	1	R5
	Disable	0	[X4F
JAN/EAN-13/8 Addon5 Scanning	Enable	1	R6
	Disable	0	[X4G
Code 39 Scanning	Enable	1	B2
	Disable	0	VB
Tri-optic Scanning	Enable	1	JZ
	Disable	0	[DDJ
NW-7 Scanning	Enable	1	B3
	Disable	0	VC
Industrial 2 of 5 Scanning	Enable	1	R7
	Disable	0	V7
Interleaved 2 of 5 Scanning	Enable	1	R8
	Disable	0	V8
S-Code Scanning	Enable	1	R9
	Disable	0	[DDK
Matrix 2 of 5 Scanning	Enable	1	BB
	Disable	0	[DDL

Setting Items	Parameters	Setting Value	Command
Code 93 Scanning	Enable	1	B5
	Disable	0	VD
Code 128 Scanning	Enable	1	B6
	Disable	0	VE
EAN-128 Scanning	Enable if Possible	2	OG
	Enable EAN-128 Only	1	JF
	Disable Code 128 as output	0	OF
MSI/Plessey Scanning	Enable	1	B7
	Disable	0	VF
IATA	Enable	1	B8
	Disable	0	VH
UK/Plessey Scanning	Enable	1	B1
	Disable	0	VA
Telepen Scanning	Enable	1	B9
	Disable	0	VG
GS1 DataBar (RSS-14)	Enable	1	JX
	Disable	0	SJ
GS1 DataBar Limited (RSS-Limited)	Enable	1	JY
	Disable	0	SK
GS1 DataBar Expanded (RSS-Expanded)	Enable	1	DR
	Disable	0	SL
Code-11 Scanning	Enable	1	[BLC
	Disable	0	[BLA
Code 3 of 5 Scanning	Enable	1	WH
	Disable	0	WI
UPC-A Format (Transmit CD)	13-digit (read 0 transmit CD)	10	E2

Setting Items	Parameters	Setting Value	Command
	12-digit (do not read 0)	2	E3
	12-digit (do not transmit CD)	8	E4
	11-digit (do not read 0 or transmit CD)	0	E5
UPC-E Format (Transmit CD)	8-digit (reading 0 transmit CD)	10	E6
	7-digit (do not read 0)	2	E7
	7-digit (do not transmit CD)	8	E8
	6-digit (do not read 0 or transmit CD)	0	E9
JAN/EAN-13 Format (Transmit CD)	Transmit CD	1	6K
	Do not transmit CD	0	6J
JAN/EAN-8 Format (Transmit CD)	Transmit CD	1	6I
	Do not transmit CD	0	6H
Transmit Code 39 CD	Transmit CD	1	D9
	Not transmit CD	0	D8
Transmit NW-7 CD	Transmit CD	1	H8
	Do not transmit CD	0	H9
Transmit Industrial 2 of 5/ Interleaved 2 of 5 CD	Transmit CD	1	E0
	Do not transmit CD	0	E1
Transmit MSI/Plessey CD	CD Transmit CD1	1	4E
	CD Transmit CD1 and CD2	2	4F
	Do not transmit CD	0	4G
Transmit IATA CD	Transmit CD	1	4L
	Do not transmit CD	0	4M
Transmit GS1 DataBar family CD	Transmit CD	1	DL

Setting Items	Parameters	Setting Value	Command
	Do not transmit CD	0	DM
Calculate WPC (UPC/EAN/JAN) CD	Calculate CD	1	[XEE
	Do not calculate CD	0	[XEF
Calculate Code 39 CD	Calculate CD	1	C0
	Do not calculate CD	0	C1
Calculate NW-7 CD	Calculate CD Mod10/W1, 2spec1	1	[XF8
	Calculate CD Mod16	2	H6
	Calculate CD 7 check	3	[XFB
	Calculate CD Mod11	4	[XFC
	Do not calculate CD	0	H7
Calculate Industrial 2 of 5/ Interleaved 2 of 5 CD	Calculate CD	1	G1
	Do not calculate CD	0	G0
Calculate Code 93 CD	Calculate CD	1	AC
	Do not calculate CD	0	9Q
Calculate Code 128 CD	Calculate CD	1	ME
	Do not calculate CD	0	MF
Calculate MSI/Plessey CD	Calculate CD CD1 only (Mod10)	1	4B
	Calculate CD's (Mod10/Mod10)	2	4C
	Calculate CD's (Mod10/Mod11)	3	4D
	Calculate CD's (Mod11/Mod10)	4	4R
	Not calculate CD	0	4A

Setting Items	Parameters	Setting Value	Command
Calculate IATA CD	Calculate CD (CPN+FORM SERIAL)	1	4J
	Calculate CD (FORM SERIAL)	2	4I
	Calculate CD (ALL DATA)	3	4K
	Do not calculate CD	0	4H
Transmit Code 39 Start Stop	Transmit	1	D0
	Do not transmit	0	D1
Transmit NW-7 Start Stop	Transmit ABCD/TN*E	1	F1
	Transmit abcd/tn*e	2	F2
	Transmit ABCD	3	F3
	Transmit abcd	4	F4
	Transmit DC1DC2DC3DC4	5	FA
	Do not transmit	0	F0
OPN3002i-Specific Settings			
Intelligent Mail Scanning	Enable	1	[D5F
	Disable	0	[D5G
Postnet Scanning	Enable	1	[D6A
	Disable	0	[D6B
Japanese postal Scanning	Enable	1	[D5P
	Disable	0	[D5Q
CodablockF Scanning	Enable	1	[D4P
	Disable	0	[D4Q
Data Matrix (ECC200) Scanning	Enable	1	[BCC
	Disable	0	[BCO
Data	Enable	1	[BG0

Setting Items	Parameters	Setting Value	Command
Matrix (ECC000-140) Scanning	Disable	0	[BG1
Aztec code Scanning	Enable	1	[BCH
	Disable	0	[BCT
Aztec runes Scanning	Enable	1	[BF2
	Disable	0	[BF3
Chinese Sensible code Scanning	Enable	1	[D4L
	Disable	0	[D4M
QR code Scanning	Enable	1	[BCD
	Disable	0	[BCP
MicroQR Scanning	Enable	1	[D2U
	Disable	0	[D2V
Maxi Code Scanning	Enable	1	[BCE
	Disable	0	[BCQ
Composite on GS1Databar Scanning	Enable	1	[BHE
	Disable	0	[BHF
Composite on UPC/EAN Scanning	Enable	1	[D1V
	Disable	0	[D1W

3.2 Scanner/Device Settings

Setting Items	Parameters	Setting Value	Command
Scanning Modes	Single Read	1	S0
	Multiple Read	2	S1
	Successive Read	3	S2
Scan Duration	Unlimited	0	YM
	0 sec	-1	Y0
	1 sec	50	Y1
	2 sec	100	Y2
	3 sec	150	Y3
	4 sec	200	Y4
	5 sec	250	Y5

Setting Items	Parameters	Setting Value	Command
	6 sec	300	Y6
	7 sec	350	Y7
	8 sec	400	Y8
	9 sec	450	Y9
	Scan Duration x10	-	YL
Number of Checks	1 Scan 0 Checks	0	X0
	2 Scan 1 Checks	1	X1
	3 Scan 2 Checks	2	X2
	4 Scan 3 Checks	3	X3
	5 Scan 4 Checks	4	BS
	6 Scan 5 Checks	5	BT
	7 Scan 6 Checks	6	BU
	8 Scan 7 Checks	7	BV
	9 Scan 8 Checks	8	BW
	10 Scan 9 Checks	9	[XBT
	11 Scan 10 Checks	10	[XBU
	12 Scan 11 Checks	11	[XBV
	13 Scan 12 Checks	12	[XBW
	14 Scan 13 Checks	13	[XBX
	15 Scan 14 Checks	14	[XBY
	16 Scan 15 Checks	15	[XBZ
Multiple Read Reset Timer	Unlimited	0	AG
	50ms	3	AH
	100ms	5	AI
	200ms	10	AJ
	300ms	15	AK
	400ms	20	AL
	500ms	25	AM
	600ms	30	AN
Add On Timer	Nothing	0	XA
	250ms	13	XB
	500ms	25	XC
	750ms	38	XD
Buzzer Volume	Maximum	127	T0

Setting Items	Parameters	Setting Value	Command
	High	32	T1
	Medium	8	T2
	Small	1	T3
LED Lighting Duration	Disable	0	T4
	200ms	10	T5
	400ms	20	T6
	600ms	30	T7
Trigger Mode	Disable Trigger	0	S7
	Enable Trigger	1	S8
Trigger Repeat	Disable	0	/K
	Enable	1	/M
Buzzer Sound	Disable	0	W0
	Enable	1	W8
Buzzer Tone	Single Tone	0	W1
	High	1	W2
	Low	2	W3
	4.5kHz	3	[XTS
	2.2kHz-2kHz	4	[X%Q
Buzzer Vibration Length	100ms	5	W4
	200ms	10	W5
	400ms	20	W6
	50ms	2	W7
Buzzer Vibration Timing	Pre-transmit Buzzer	0	VY
	Post-transmit Buzzer	1	VZ
Connected Partner Address		charx 12¥0	
	Start Address Settings	-	]BDAS
	Finish Address Settings	-	]BDAE
Command Response	YES (ACK/NAK)	1	WC
	Adheres to BT33(0-7) Settings	0	WD
PIN Code		charx	

Setting Items	Parameters	Setting Value	Command
		16#0	
	Start PIN Settings	-	]PINS
	Finish PIN Settings	-	]PINE
Trigger Connect	Disable	0	]TSCD
	Enable	1	]TSCE
Enable/Disable connection processing via address barcodes	Disable	0	]DIAU
	Enable	1	]ENAU
ACK/NAK Controls	N/A	0	]XP5
	YES	1	P3
	YES (No Response)	2	P4
Connection Mode	SPP Master	0	]BCMA
	SPP Slave	1	]BCSA
	HID	2	]C02
Slave Connect Wait Time	30 sec	1500	]SWT0
	1 min	3000	]SWT1
	2 min	6000	]SWT2
	3 min	9000	]SWT3
	4 min	12000	]SWT4
Effective Auto Reconnect Time	Disable	0	]CA00
	1 min	3000	]CA01
	2 min	6000	]CA02
	3 min	9000	]CA03
	4 min	12000	]CA04
	5 min	15000	]CA05
	6 min	18000	]CA06
	7 min	21000	]CA07
	8 min	24000	]CA08
	9 min	27000	]CA09
	10 min	30000	]CA10
	11 min	33000	]CA11
	12 min	36000	]CA12

Setting Items	Parameters	Setting Value	Command	
	13 min	39000	]CA13
	14 min	42000	]CA14
	15 min	45000	]CA15
Auto Disconnect Time	Disable	0	]AD00
	10 min	30000	]AD01
	20 min	60000	]AD02
	30 min	90000	]AD03
	40 min	120000	]AD04
	50 min	150000	]AD05
	60 min	180000	]AD06
	1 min	3000	]ADM1
	2 min	6000	]ADM2
	3 min	9000	]ADM3
	4 min	12000	]ADM4
	5 min	15000	]ADM5
	6 min	18000	]ADM6
	7 min	21000	]ADM7
	8 min	24000	]ADM8
	9 min	27000	]ADM9
	10 sec	500	]ADS1
	20 sec	1000	]ADS2
	30 sec	1500	]ADS3
	40 sec	2000	]ADS4
	50 sec	2500	]ADS5
	Trigger Connect Press Time	Disable Trigger Connect	0]PC00
		1 sec	50]PC01
2 sec		100	]PC02
3 sec		150	]PC03
4 sec		200	]PC04
5 sec		250	]PC05
6 sec		300	]PC06
7 sec		350	]PC07
8 sec		400	]PC08
9 sec		450	]PC09

Setting Items	Parameters	Setting Value	Command
Trigger Disconnect Press Time	Disable Trigger Disconnect	0	]PD00
	1 sec	50	]PD01
	2 sec	100	]PD02
	3 sec	150	]PD03
	4 sec	200	]PD04
	5 sec	250	]PD05
	6 sec	300	]PD06
	7 sec	350	]PD07
	8 sec	400	]PD08
	9 sec	450	]PD09
ACK/NAK Wait Time	1s	50	[XI7
	2s	100	[XI8
	5s	250	[XI9
Outside-Range Memory	Disable	0	]DTMD
	Enable	1	]DTME
Data Collect	Enable	0	[BM0
	Disable	1	[BM1
Barcode Read Auto Connect	Disable	0	]ARCD
	Enable	1	]ARCE
Data Collector Disconnect Buzzer	Disable	0	]DSSD
	Enable	1	]DSSE
Connection Partner Disconnect Buzzer	Disable	0	]DSPD
	Enable	1	]DSPE
Memory Data Output Method	Immediate Output when Connecting	0	[EBB
	Outputted via Function Key or Commands	1	[EBC
	Data Output Commands		[EBD
COM Communication when connected to USB	Disable	0	[C10
	Enable	1	[C11
Function Press Output	HT	0x09	[\$09
	LF	0x0A	[\$0A
	CR	0x0D	[\$0D

Setting Items	Parameters	Setting Value	Command
	CAN	0x18	[\$18
	ESC	0x1B	[\$1B
	iPhone Soft Keyboard Display	0xA6	[\$A6
	ENTER	0xB2	[\$B2
Bluetooth Device Name	Start Device Settings	-	[E65
	Finish Device Settings	-	[E66
Previous Slave Connection Partner Address (12-characters + NUL)			
OPN3002i-Specific Settings			
Good Read Vibrator	Enable	1	[EBI
	Disable	0xFF	[EBH

3.3 Prefix

Setting Items	-	-	Command
UPC-A Prefix			N1
UPC-A Add On Prefix			M0
UPC-E Prefix			N2
UPC-E Add On Prefix			M1
JAN/EAN-13 Prefix			N3
JAN/EAN-13 Add On Prefix			M2
JAN/EAN-8 Prefix			N4
JAN/EAN-8 Add On Prefix			M3
Code 39 Prefix			M4
Tri-Optic Prefix			MC
NW-7 Prefix			M5
Industrial 2 of 5 Prefix			M6
Interleaved 2 of 5 Prefix			M7
S Code Prefix			MB
Matrix 2 of 5 Prefix			GL

Setting Items	-	-	Command
Code 39 Prefix			M8
Code 128 Prefix			M9
MSI/Plessey Prefix			N0 (zero)
IATA Prefix			I8
UK/Plessey Prefix			MA
Telepen Prefix			L8
RSS Prefix			OE
Code 11 Prefix			[BLD
Code 3 of 5 Prefix			*\$
EAN-128 Prefix			[XMX
Common Prefix Settings			MZ
All Code Prefix Settings			RY
OPN3002i-Specific Settings			
Intelligent Mail Prefix			[D5I
Postnet Prefix			[D6D
Japanese postal Prefix			[D5S
CodablockF Prefix			[D4S
DataMatrix (ECC200, ECC000-140) Prefix			MD
Aztec code/Aztec Runes Prefix			[BF0
Chinese Sensible code Prefix			[D4N
QR/MicroQR Prefix			MK
Maxi code Prefix			ML
Composite (on GS1Databar,UPC/EAN) Prefix			RR

3.4 Suffix

Setting Items	-	-	Command
UPC-A Suffix			N6
UPC-A Add On Suffix			O0 (O zero)
UPC-E Suffix			N7
UPC-E Add On Suffix			O1
JAN/EAN-13 Suffix			N8
JAN/EAN-13 Add On Suffix			O2
JAN/EAN-8 Suffix			N9
JAN/EAN-8 Add On Suffix			O3
Code-39 Suffix			O4
Tri-Optic Suffix			PN
NW-7 Suffix			O5
Industrial 2of5 Suffix			O6
Interleaved 2of5 Suffix			O7
S Code Suffix			OB
Matrix 2 of 5 Suffix			GM
Code 93 Suffix			O8
Code-128 Suffix			O9
MSI/Plessey Suffix			N5
IATA Suffix			I9
UK/Plessey Suffix			OA
Telepen Suffix			L9
RSS Suffix			PQ
Code 11 Suffix			[BLE
Code 3 of 5 Suffix			*%
EAN-128 Suffix			[XOX
Common Suffix			PS
All Code Suffix Settings			RZ
OPN3002i-Specific Settings			
Intelligent Mail Suffix			[D5J

Setting Items	-	-	Command
Postnet Suffix			[D6E
Japanese postal Suffix			[D5T
CodablockF Suffix			[D4T
DataMatrix (ECC200, ECC000-140) Suffix			PO
Aztec code/Aztec Runes Suffix			[BF1
Chinese Sensible code Suffix			[D4O
QR/MicroQR Suffix			PW
Maxi code Suffix			PX
Composite (on GS1Databar, UPC/EAN) Suffix			RS

3.5 Character String Settings

Setting Characters	Command	Usable Settings	XZ5 Output
0	Q0	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3000
1	Q1	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3100
2	Q2	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3200
3	Q3	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3300
4	Q4	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3400
5	Q5	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3500

Setting Characters	Command	Usable Settings	XZ5 Output
6	Q6	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3600
7	Q7	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3700
8	Q8	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3800
9	Q9	Time, PIN, Connection Partner Address, Device Name, Prefix, Suffix	3900
A	0A	Connection Partner Address, Device Name, Prefix, Suffix	4100
B	0B	Connection Partner Address, Device Name, Prefix, Suffix	4200
C	0C	Connection Partner Address, Device Name, Prefix, Suffix	4300
D	0D	Connection Partner Address, Device Name, Prefix, Suffix	4400
E	0E	Connection Partner Address, Device Name, Prefix, Suffix	4500
F	0F	Connection Partner Address, Device Name, Prefix, Suffix	4600
G	0G	Device Name, Prefix, Suffix	4700
H	0H	Device Name, Prefix, Suffix	4800
I	0I	Device Name, Prefix, Suffix	4900
J	0J	Device Name, Prefix, Suffix	4A00
K	0K	Device Name, Prefix, Suffix	4B00
L	0L	Device Name, Prefix, Suffix	4C00
M	0M	Device Name, Prefix, Suffix	4D00
N	0N	Device Name, Prefix, Suffix	4E00
O	0O	Device Name, Prefix, Suffix	4F00
P	0P	Device Name, Prefix, Suffix	5000
Q	0Q	Device Name, Prefix, Suffix	5100
R	0R	Device Name, Prefix, Suffix	5200

Setting Characters	Command	Usable Settings	XZ5 Output
S	OS	Device Name, Prefix, Suffix	5300
T	OT	Device Name, Prefix, Suffix	5400
U	OU	Device Name, Prefix, Suffix	5500
V	OV	Device Name, Prefix, Suffix	5600
W	OW	Device Name, Prefix, Suffix	5700
X	OX	Device Name, Prefix, Suffix	5800
Y	OY	Device Name, Prefix, Suffix	5900
Z	OZ	Device Name, Prefix, Suffix	5A00
a	\$A	Device Name, Prefix, Suffix	6100
b	\$B	Device Name, Prefix, Suffix	6200
c	\$C	Device Name, Prefix, Suffix	6300
d	\$D	Device Name, Prefix, Suffix	6400
e	\$E	Device Name, Prefix, Suffix	6500
f	\$F	Device Name, Prefix, Suffix	6600
g	\$G	Device Name, Prefix, Suffix	6700
h	\$H	Device Name, Prefix, Suffix	6800
i	\$I	Device Name, Prefix, Suffix	6900
j	\$J	Device Name, Prefix, Suffix	6A00
k	\$K	Device Name, Prefix, Suffix	6B00
l	\$L	Device Name, Prefix, Suffix	6C00
m	\$M	Device Name, Prefix, Suffix	6D00
n	\$N	Device Name, Prefix, Suffix	6E00
o	\$O	Device Name, Prefix, Suffix	6F00
p	\$P	Device Name, Prefix, Suffix	7000
q	\$Q	Device Name, Prefix, Suffix	7100
r	\$R	Device Name, Prefix, Suffix	7200
s	\$S	Device Name, Prefix, Suffix	7300
t	\$T	Device Name, Prefix, Suffix	7400
u	\$U	Device Name, Prefix, Suffix	7500
v	\$V	Device Name, Prefix, Suffix	7600
w	\$W	Device Name, Prefix, Suffix	7700
x	\$X	Device Name, Prefix, Suffix	7800
y	\$Y	Device Name, Prefix, Suffix	7900

Setting Characters	Command	Usable Settings	XZ5 Output
z	\$Z	Device Name, Prefix, Suffix	7A00
<SPACE>	5A	Device Name, Prefix, Suffix	2000
!	5B	Device Name, Prefix, Suffix	2100
"	5C	Device Name, Prefix, Suffix	2200
#	5D	Device Name, Prefix, Suffix	2300
\$	5E	Device Name, Prefix, Suffix	2400
%	5F	Device Name, Prefix, Suffix	2500
&	5G	Device Name, Prefix, Suffix	2600
'	5H	Device Name, Prefix, Suffix	2700
(	5I	Device Name, Prefix, Suffix	2800
)	5J	Device Name, Prefix, Suffix	2900
*	5K	Device Name, Prefix, Suffix	2A00
+	5L	Device Name, Prefix, Suffix	2B00
,	5M	Device Name, Prefix, Suffix	2C00
-	5N	Device Name, Prefix, Suffix	2D00
.	5O	Device Name, Prefix, Suffix	2E00
/	5P	Device Name, Prefix, Suffix	2F00
:	6A	Device Name, Prefix, Suffix	3A00
;	6B	Device Name, Prefix, Suffix	3B00
<	6C	Device Name, Prefix, Suffix	3C00
=	6D	Device Name, Prefix, Suffix	3D00
>	6E	Device Name, Prefix, Suffix	3E00
?	6F	Device Name, Prefix, Suffix	3F00
@	6G	Device Name, Prefix, Suffix	4000
[	7A	Device Name, Prefix, Suffix	5B00
\	7B	Device Name, Prefix, Suffix	5C00
]	7C	Device Name, Prefix, Suffix	5D00
^	7D	Device Name, Prefix, Suffix	5E00
_	7E	Device Name, Prefix, Suffix	5F00
`	7F	Device Name, Prefix, Suffix	6000
{	9T	Device Name, Prefix, Suffix	7B00
|	9U	Device Name, Prefix, Suffix	7C00
}	9V	Device Name, Prefix, Suffix	7D00

Setting Characters	Command	Usable Settings	XZ5 Output
~	9W	Device Name, Prefix, Suffix	7E00
^@ (NULL)	9G	Prefix, Suffix	00FF
^A (SOH)	1A	Prefix, Suffix	01FF
^B (STX)	1B	Prefix, Suffix	02FF
^C (ETX)	1C	Prefix, Suffix	03FF
^D (EOT)	1D	Prefix, Suffix	04FF
^E (ENQ)	1E	Prefix, Suffix	05FF
^F (ACK)	1F	Prefix, Suffix	06FF
^G (BEL)	1G	Prefix, Suffix	07FF
^H (BS)	1H	Prefix, Suffix	08FF
^I (HT)	1I	Prefix, Suffix	09FF
^J (LF)	1J	Prefix, Suffix	0AFF
^K (VT)	1K	Prefix, Suffix	0BFF
^L (FF)	1L	Prefix, Suffix	0CFF
^M (CR)	1M	Prefix, Suffix	0DFF
^N (SO)	1N	Prefix, Suffix	0EFF
^O (SI)	1O	Prefix, Suffix	0FFF
^P (DLE)	1P	Prefix, Suffix	1FF0
^Q (DC1)	1Q	Prefix, Suffix	11FF
^R (DC2)	1R	Prefix, Suffix	12FF
^S (DC3)	1S	Prefix, Suffix	13FF
^T (DC4)	1T	Prefix, Suffix	14FF
^U (NAK)	1U	Prefix, Suffix	15FF
^V (SYN)	1V	Prefix, Suffix	16FF
^W (ETB)	1W	Prefix, Suffix	17FF
^X (CAN)	1X	Prefix, Suffix	18FF
^Y (EM)	1Y	Prefix, Suffix	19FF
^Z (SUB)	1Z	Prefix, Suffix	1AFF
^[(ESC)	9A	Prefix, Suffix	1BFF
^\ (FS)	9B	Prefix, Suffix	1CFF
^] (GS)	9C	Prefix, Suffix	1DFF
^^ (RS)	9D	Prefix, Suffix	1EFF
^_ (US)	9E	Prefix, Suffix	1FFF

Setting Characters	Command	Usable Settings	XZ5 Output
DEL (ASCII 127)	9F	Prefix, Suffix	7FFF
Year	[\$YR	Prefix, Suffix	2559
Month	[\$MO	Prefix, Suffix	254D
Day	[\$DY	Prefix, Suffix	2544
Time	[\$HR	Prefix, Suffix	2568
Minute	[\$MI	Prefix, Suffix	256D
Second	[\$SC	Prefix, Suffix	2573
Scan Count	[\$CT	Prefix, Suffix	2543
Barcode Type	[\$BT	Prefix, Suffix	2554
Barcode Data Length	[\$BL	Prefix, Suffix	254C
Battery Voltage	[\$BV	Prefix, Suffix	2556
BD Address	[\$AR	Prefix, Suffix	2541
Terminal ID	[\$ID	Prefix, Suffix	2549
Terminal Name	[\$NM	Prefix, Suffix	254E

4. Distribution

It is important to register software with the MFi Authentication Device maker, in order to distribute applications that connect devices from the iTunes Store. However, no registration is necessary for Ad hoc or Enterprise distribution. Please contact Opticon if you need to distribute directly from the iTunes Store.

Model Name: OPN2002i Series
OPN3002i Series
Revision Number: 1.1
DOC_ID: SI12057