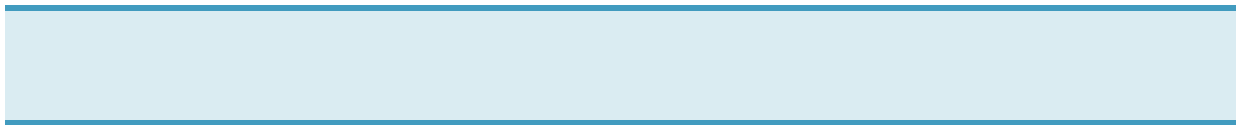


OPN-3200 i
OPN-4200 i

OPN-3200i OPN-4200i

2 2015 6



Bluetooth

OPN-3200i OPN-4200i

/

A4

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Bluetooth

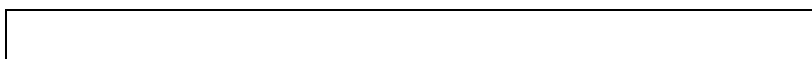
Bluetooth SIG, Inc.

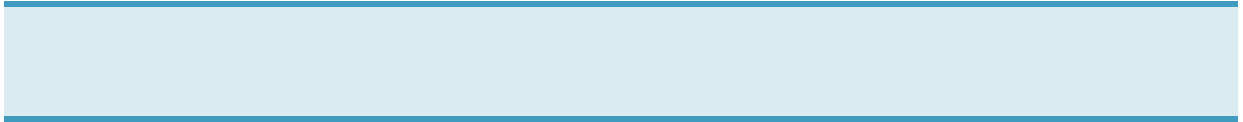
()

iPhone iPad

iPod

Apple Inc.





(1) :

(2) :

(3) : (1)

(4) :

CRT

(1)



2.4 GHz

Bluetooth



Bluetooth
: 2 1 19
2.4 GHz
: OPA-26X1
: 201-125603

Bluetooth



Bluetooth

Bluetooth ()

Bluetooth

Bluetooth (2.4 GHz)


Bluetooth


() Bluetooth Bluetooth



Bluetooth 2.4 GHz

) Bluetooth (

(1) LED 
IEC 62471-1:2006

(2) 
EN60950-1:2005 IEC60950-1:2006

(3) EMC 
R & TTE

- EN 55022:2010
- EN 301 489-1 V1.9.2
- EN 301 489-17 V2.1.1
- EN 300 328 V1.8.1

FCC Part 15 Subpart C , Subpart B ClassB

Federal Communications Commission Notices

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Harmful Interference Notice

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

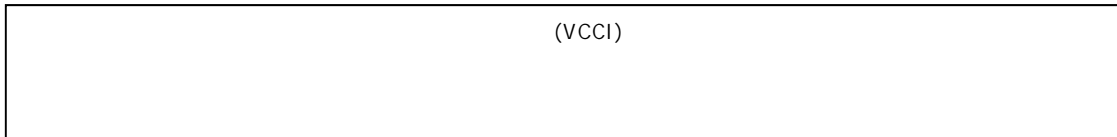
- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

Changes or modifications to this equipment that have not been approved by Ruckus Wireless may void the user's authority to operate this equipment.

RF Exposure Information

This product complies with FCC radiation exposure limits set forth an uncontrolled environment.

VCCI B



(4)























Bluetooth 
 MFi 




"Made for iPod," "Made for iPhone," and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

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1.

1.1.

OPN-3200i Bluetooth (2)
OPN-4200i Bluetooth D (1)

	(*1)			iOS (*2)	Android	Windows
	D	D				
OPN-3200i			LED			
OPN-4200i			LED			

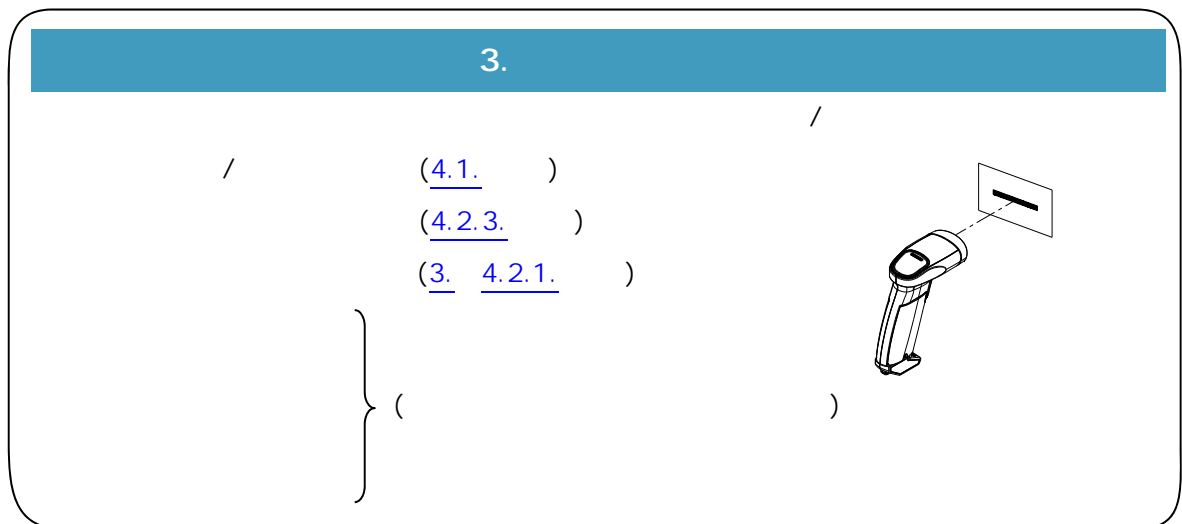
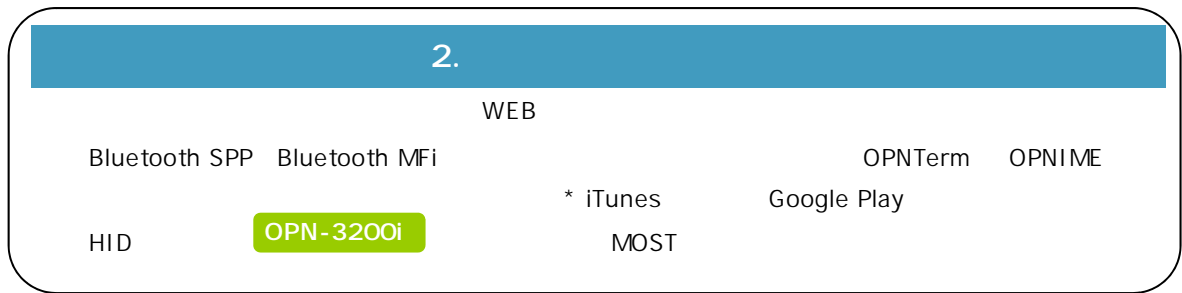
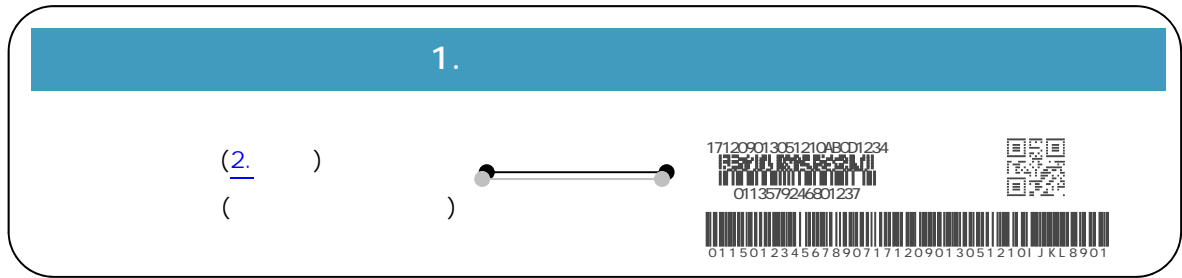
* 1:

* 2: iOS Apple iPhone iPad iPod touch OS



PC PC Bluetooth
 Bluetooth Bluetooth
 Bluetooth SPP HID
 iPhone iPad iPod touch (Apple MFi)

1.2.



2.

2.1.

2.2.

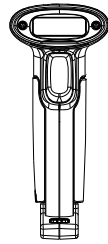
2.3.

2.4.

2.1.

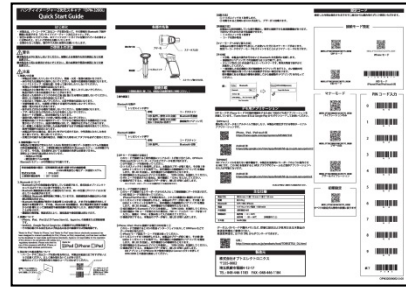
OPN -3200i

OPN-4200i



() 1

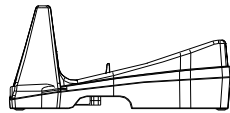
OPN-3200i / OPN-4200i



1

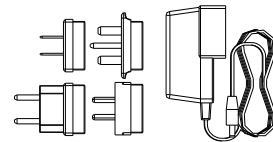


1



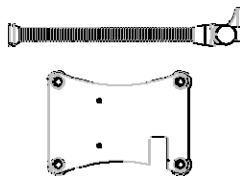
1

CHG-3201



AC

1



1

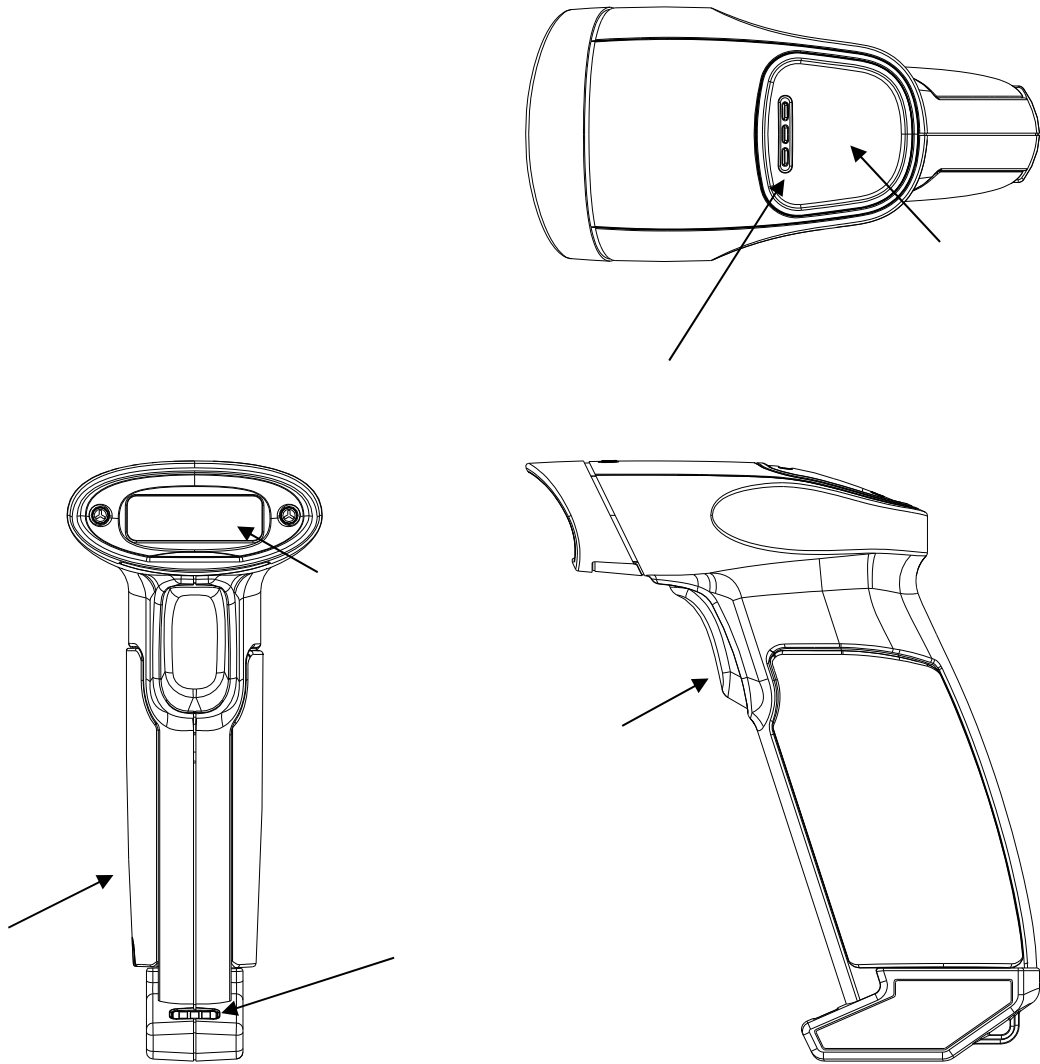
STD-0171

CHG-3201

2.2.

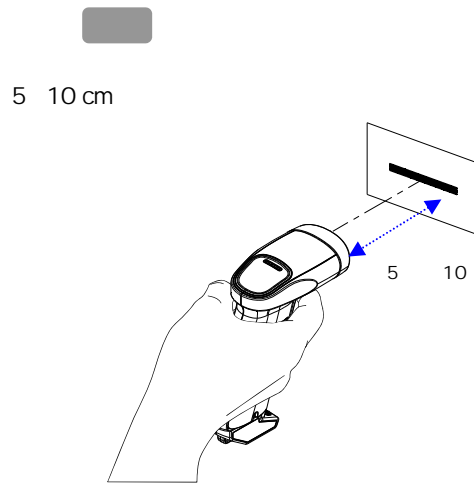
OPN-3200i

OPN-4200i



	LED
LED	Bluetooth
	CHG-3201

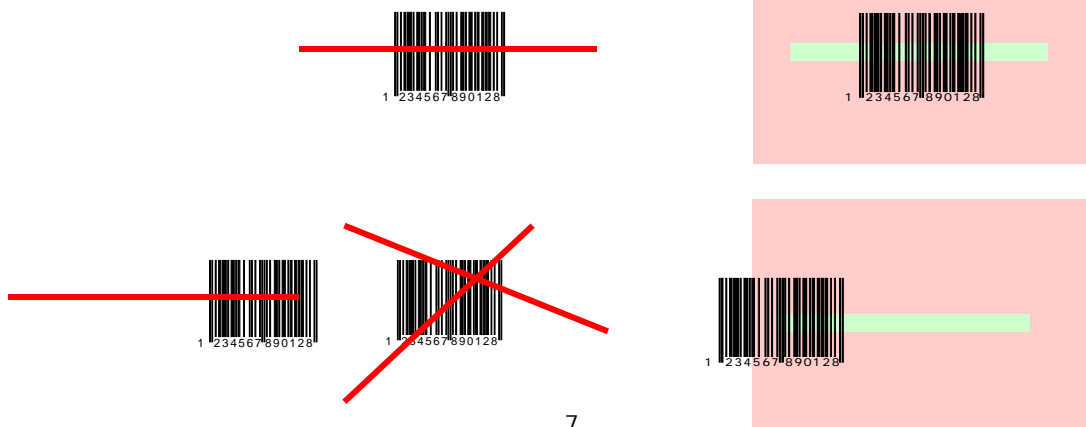
2.3.



LED () (LED)
)
)

OPN-4200i

OPN-3200i



2.4.



LED

	LED			
			/	
Bluetooth			Bluetooth	
			Bluetooth	
			Bluetooth	
Bluetooth			Bluetooth	
			Bluetooth ()	

3.

Bluetooth

3.1. Bluetooth

3.2.

3.3.

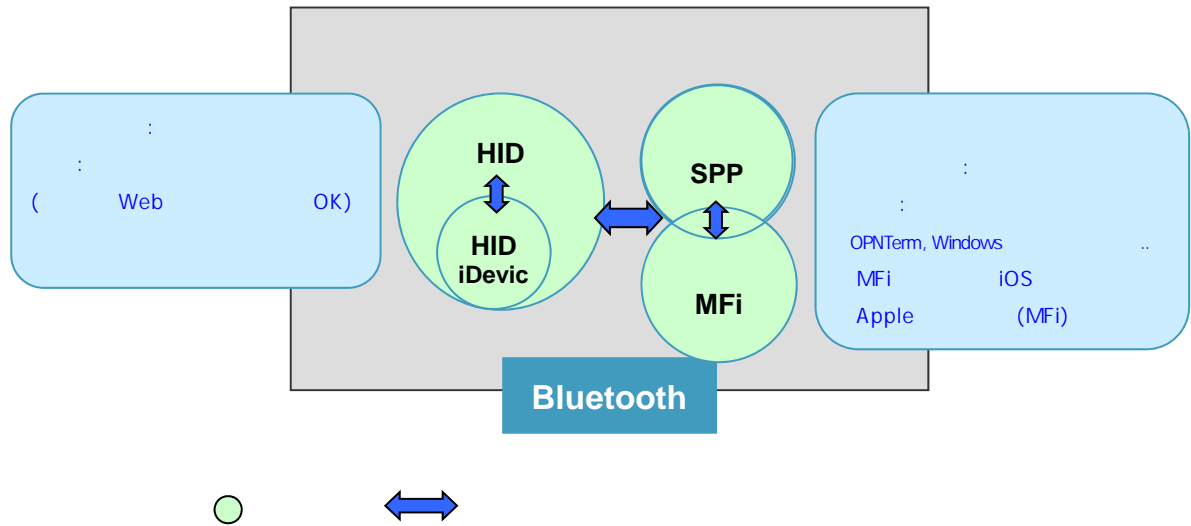
3.4.

3.1. Bluetooth

Bluetooth
: 2402 2480 MHz
: Bluetooth Ver.2.1
: 10
: 2 (4 dBm)
: SPP/HID
: 1 1
: /
:

3.2.

Bluetooth	HID	HID-iDevice	SPP	MFi
-----------	-----	-------------	-----	-----



Bluetooth	HID	Web
	HID iDevice	iPhone, iPad, iPod touch iDevice (iDevice): HID Web
	SPP	() ((*)) ()
	MFi (*1)	iOS Apple Bluetooth SPP (Apple MFi) iPhone, iPad, iPod touch (*)

*1: iPhone

*2: OPNTerm OPNIME Windows

OPNTerm OPNIME iTunes Store Google Paly

3.3.



Bluetooth SPP ()

Bluetooth SPP ()

Bluetooth HID

Bluetooth HID iDevice

Bluetooth MFi

Bluetooth SPP ()



1

' /

SPP

Bluetooth

BD

BD

2

(3)

' 12

BD

3

LED

4

PIN

PIN

1234

5

LED

LED

PIN

BD

()

6



1

'
'

(5

(3)

2

LED



'
'

(3)

Bluetooth SPP ()



1

' /

SPP

Bluetooth

2

' (3)



3

LED

4

Bluetooth

5

PIN

1234

PIN

6

LED

LED

PIN

2

7



1

' (3)

2

LED

Bluetooth HID



1

/' /

HID

Bluetooth

2

(3)

3

LED

4

PIN

PIN

PIN

5

LED

LED

PIN

2

6



1

/' /

(5

(3)

2

LED



‘ (3)

‘

Bluetooth HID iDevice



1



HID iDevice

[Bluetooth](#)

2



3

LED

4

iPhone / iPad / iPod Bluetooth

[] - [] - [Bluetooth]



5

PIN

iPhone / iPad / iPod

PIN

[PIN](#)

6

LED
LED

PIN

2

7



1

,

(5

(3)

2

LED



,

(3)

,

Bluetooth MFi



iPhone / iPad / iPod: iOS 6.0



1



MFi

[Bluetooth](#)

2



3

LED

4

iPhone / iPad / iPod Bluetooth

[] - [] - [Bluetooth]



5

LED

iPhone

(

LED

)

LED

PIN

2

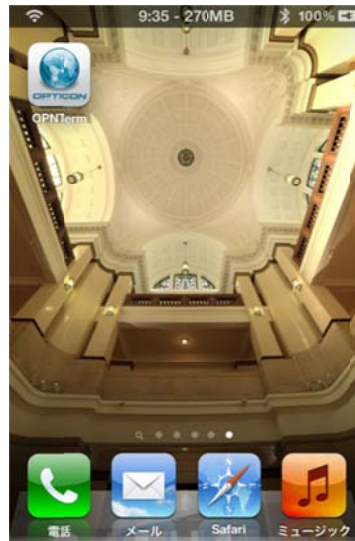
6

iPhone / iPad / iPod

() OPNTerm

[Connect]

OPN



7



1

,

(

3)

,

(

5

2

LED



,

(

3)

,

3.4.



' Bluetooth 12 BD

: 12 BD

: 12

' 12 BD :DIAU

' LED LED

' LED

' LED

'

'

'

' 20

' : DTME]

'

4.

4.1.

4.2.

4.2.1.

4.2.2.

4.2.3.

4.3.

4.1.

() Enter

SET	<u>ZZ</u>	ZZ
	<u>W8</u>	W8
	<u>W9</u>	W9
	<u>W0</u>	W0
	<u>W1</u>	W1
-	<u>W2</u>	W2
-	<u>W3</u>	W3
50 msec	<u>W7</u>	W7
100 msec	<u>W4</u>	W4
200 msec	<u>W5</u>	W5
400 msec	<u>W6</u>	W6
	<u>T0</u>	T0
(END)	<u>ZZ</u>	ZZ

Save

1. (ZZ)

2.

3. (ZZ)

2

OPN-3200i

(OPN-3200i) 2

2

@ MENU_OPTO@ ZZ@ _____ 1@ _____ 2@ ZZ@ OTPO_UNEM@

@ MENU_OPTO	
@	
ZZ	
@	: [WO]
@	: [EBI] GR
@	
ZZ	
@	
OTPO_UNEM@	

2

2

(PDF417 QR)

2

:

	2	
	 <p>@MENU_OPTO@ZZ@WO@EBI @ZZ@OTPO_UNEM@</p>	ZZ
		WO
		EBI
		ZZ



Bluetooth SPP Bluetooth MFi

	1		
< ESC > (0x0B) < STX > (0x02)		1 2 (ASCII)	< CR > (0x0D) < ETX > (0x03)
	[(0x5B)	3 (ASCII)	
] (0x5D)	4 (ASCII)	
	{ (0x7B) ²	5 (ASCII) ²	

1 (1)

2 OPN-3200i/n

:

- 1 : < Esc > B < CR >
- 2 : < Esc > W O < CR >
- 3 : < Esc > [E B I < CR >
- 4 : < Esc >] B C M A < CR >
- 2 3 : < Esc > W O [C 1 1 < CR >

"Z2"

2

"Z2"

4.2.



/ Bluetooth

4.2.1.



4.2.3.



LED

4.2.1.



Bluetooth

Bluetooth /

Bluetooth

Bluetooth

SPP	BCMA	()	
SPP	BCSA	()	
HID	CO2		
HID iDevice	BCHI		
MFi (1)	BCSI		

1 iPhone

3.2.

5.1. Bluetooth

7.2. Bluetooth

BD

BD (Bluetooth Device)

BD 12 O 9 A F (BD)

Code 39 Code 128 12 BD

BD

(1) Code 128 BD "B8: FF: 61: 32: 7C: B2":



(2) Code 39 BD "B8: FF: 61: 32: 7C: B2":



[ZZ] [BDAS] [12] [BDAE] [ZZ]

BD 12 BD 12

5.1. BD

BD

BD

	ENAU	
	DIAU	

Code 39

Code 128

12

BD

BD

5.1.

BD

Bluetooth

BD

Code 39

Code 128

12

BD

	ARCE	
	ARCD	

5.1.

PIN

' (Secure Simple Pairing) Bluetooth 2.1
 ' PIN
 ' PIN (1234)
 ' PIN PIN 1 16
 ' HID PIN
 PIN 0 9 [PINE]

5.1. PIN

HID

US	KE	
	PM	

5.1.

/
/

	TSCE	
	TSCD	

5.1.

BD / :

	+ -CONN-+		
	+ -DISC-+		

5.1. /

Bluetooth

	PC00	
1 ~ 9	PC01 ~ PC09	3

5.1. /

Bluetooth

	PD00	
1 ~ 9	PD01 ~ PD09	5

5.1. /

Bluetooth

/

	AD00	
1 ~ 9	ADM1 ~ ADM9	3
10 ~ 50	ADS1 ~ ADM5	
10 ~ 60	AD01 ~ AD06	

5.1.

	DSSE	
	DSSD	

	DSPE	
	DSPD	

5.1.

ACK/NAK

ACK/NAK

	XP5	
	P3	
(No Response)	P4	

3

5.1. ACK/NAK

ACK/NAK

ACK/NAK ()

1	XI7	
2	XI8	
5	XI9	

5.1. ACK/NAK

ACK

NAK

	WC	
	WD	

ACK/NAK

5.1.

SPP ()

30	SWT0	
1 ~ 4	SWT1 ~ SWT4	2

[5.1.](#)

Bluetooth (local name) 19

[5.1.](#)

4.2.2.



JAN-13

OPN-3200i

17000 OPN-4200i 16300
()

	DTME	
	DTMD	

5. .

(4.2.1.

_____)

	BM1	
	BMO	

5.2.

	CA00	
1 ~ 15	CA01 ~ CA15	

5

5

20

5

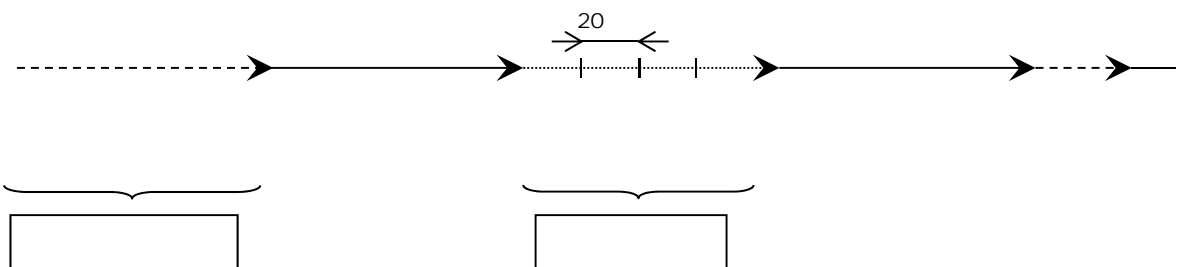
[CA00]

5.2.

	EBB		
	EBC	2	
	EBD		

5.

5.



4.2.3.



	SO	()	

[5.3.](#)

[7.2.](#)

4.3.



- ' Bluetooth
- ' USB Bluetooth USB
- ' PDA SPP COM

5.

OPN

5.1.

5.2.

5.3.

5.4.






5.1.

Bluetooth

		__ZZ__	ZZ
	SPP	__BCMA__	BCMA
	SPP	__BCSA__	BCSA
	HID	__C02__	C02
	HID iDevice	__BCHI__	BCHI
	MFi (1)	__BCSI__	BCSI
		__ZZ__	ZZ

1 iPhone

OPN-3200i

	SPP	 @MENU_OPTO@ZZ@BCMA@ZZ@OTPO_UNEM@	BCMA
	SPP	 @MENU_OPTO@ZZ@BCSA@ZZ@OTPO_UNEM@	BCSA
	HID	 @MENU_OPTO@ZZ@CO2@ZZ@OTPO_UNEM@	CO2
	HID iDevice	 @MENU_OPTO@ZZ@BCHI@ZZ@OTPO_UNEM@	BCHI
	MFi (1)	 @MENU_OPTO@ZZ@BCSI@ZZ@OTPO_UNEM@	BCSI

1 iPhone

BD

		__ZZ__	ZZ
BD		__BDAS__	BDAS
		__BDAE__	BDAE
		__ZZ__	ZZ

BD

0	__Q0__	8	__Q8__
1	__Q1__	9	__Q9__
2	__Q2__	A	__QA__
3	__Q3__	B	__QB__
4	__Q4__	C	__QC__
5	__Q5__	D	__QD__
6	__Q6__	E	__QE__
7	__Q7__	F	__QF__

BD

		ZZ	ZZ
BD		_enau_	ENAU
		di au	DIAU
		ZZ	ZZ

		ZZ	ZZ
		arce	ARCE
		arcd	ARCD
		ZZ	ZZ

PIN

		__ZZ__	ZZ
PIN		_PI NS_	PINS
		PI NE	PINE
		__ZZ__	ZZ

PIN

0	__Q0__	5	__Q5__
1	__Q1__	6	__Q6__
2	__Q2__	7	__Q7__
3	__Q3__	8	__Q8__
4	__Q4__	9	__Q9__

PIN

PIN

/

[ZZ]

[PINS]

[PINE]



		__ZZ__	ZZ
	US	__KE__	KE
		__PM__	PM
		__ZZ__	ZZ



		__ZZ__	ZZ
/		__TSCE__	TSCE
/		__TSCD__	TSCD
		__ZZ__	ZZ



		__+ - CONN- +__	+ -CONN-+
		__+ - DI SC- +__	+ -DISC-+

/ [ZZ]



		ZZ	ZZ
		PC00	PC00
	1	_PC01_	PC01
	2	_PC02_	PC02
	3	_PC03_	PC03
	4	_PC04_	PC04
	5	_PC05_	PC05
	6	_PC06_	PC06
	7	_PC07_	PC07
	8	_PC08_	PC08
	9	_PC09_	PC09
		ZZ	ZZ



		ZZ	ZZ
		PD00	PD00
	1	_PD01_	PD01
	2	_PD02_	PD02
	3	_PD03_	PD03
	4	_PD04_	PD04
	5	_PD05_	PD05
	6	_PD06_	PD06
	7	_PD07_	PD07
	8	_PD08_	PD08
	9	_PD09_	PD09
		ZZ	ZZ

		ZZ	ZZ
		AD00	AD00
	1	_ADM1_	ADM1
	2	_ADM2_	ADM2
	3	_ADM3_	ADM3
	4	_ADM4_	ADM4
	5	_ADM5_	ADM5
	6	_ADM6_	ADM6
	7	_ADM7_	ADM7
	8	_ADM8_	ADM8
	9	_ADM9_	ADM9
		ZZ	ZZ

		ZZ	ZZ
		DSSE	DSSE
		DSSD	DSSD
		ZZ	ZZ

		ZZ	ZZ
		DSPE	DSPE
		DSPD	DSPD
		ZZ	ZZ

ACK/NAK

		ZZ	ZZ
ACK/NAK		_XP5_	XP5
		P3	P3
	(No Response)	_P4_	P4
		ZZ	ZZ

ACK/NAK

		ZZ	ZZ
ACK/NAK	1	_XI 7_	XI7
	2	_XI 8_	XI8
	5	_XI 9_	XI9
		ZZ	ZZ



		ZZ	ZZ
		WC	WC
		WD	WD
		ZZ	ZZ



		ZZ	ZZ
	30	_SWT0_	SWT0
	1	_SWT1_	SWT1
	2	_SWT2_	SWT2
	3	_SWT3_	SWT3
	4	_SWT4_	SWT4
		ZZ	ZZ



		ZZ	ZZ
		E65	E65
		E66	E66
		ZZ	ZZ

[ZZ] [E65] [19] [E66] [ZZ] [E65] [E65]
 [E66]

1



A	_0a_	0A
B	_0B_	0B
C	_0C_	0C
D	_0D_	0D
E	_0E_	0E
F	_0F_	0F
G	_0G_	0G
H	_0H_	0H
I	_0I_	0I
J	_0J_	0J


2

K	_OK_	OK
L	_OL_	OL
M	_OM_	OM
N	_ON_	ON
O	_OO_	OO
P	_OP_	OP
Q	_OQ_	OQ
R	_OR_	OR
S	_OS_	OS
T	_OT_	OT
U	_OU_	OU
V	_OV_	OV
W	_OW_	OW
X	_OX_	OX
Y	_OY_	OY
Z	_OZ_	OZ


3 

0	_ Q0 _	Q0
1	_ Q1 _	Q1
2	_ Q2 _	Q2
3	_ Q3 _	Q3
4	_ Q4 _	Q4
5	_ Q5 _	Q5
6	_ Q6 _	Q6
7	_ Q7 _	Q7
8	_ Q8 _	Q8
9	_ Q9 _	Q9
< SPASE >	_ 5A _	5A
(_ 5I _	5I
)	_ 5J _	5J
-	_ 5N _	5N
.	_ 5O _	5O
=	_ 7E _	7E

5.2.



		ZZ	ZZ
		DTME	DTME
		DTMD	DTMD
		ZZ	ZZ



		ZZ	ZZ
		bm1	BM1
		bm0	BM0
		ZZ	ZZ

		ZZ	ZZ
	10	_ADS1_	ADS1
	20	_ADS2_	ADS2
	30	_ADS3_	ADS3
	40	_ADS4_	ADS4
	50	_ADS5_	ADS5
	10	_AD01_	AD01
	20	_AD02_	AD02
	30	_AD03_	AD03
	40	_AD04_	AD04
	50	_AD05_	AD05
	60	_AD06_	AD06
		ZZ	ZZ

		ZZ	ZZ
		CA00	CA00
	1	_CA01_	CA01
	2	_CA02_	CA02
	3	_CA03_	CA03
	4	_CA04_	CA04
	5	_CA05_	CA05
	6	_CA06_	CA06
	7	_CA07_	CA07
	8	_CA08_	CA08
	9	_CA09_	CA09
	10	_CA10_	CA10
	11	_CA11_	CA11
	12	_CA12_	CA12
	13	_CA13_	CA13
	14	_CA14_	CA14
	15	_CA15_	CA15
		ZZ	ZZ

	ZZ		ZZ
		EBB	EBB
		EBC	EBC
		EBD	EBD
	ZZ		ZZ

	+ - mcl r - +	+ -MCLR- +
--	-----------------	------------

/ [ZZ]

5.3.



SO



	ZZ	ZZ
	SO	SO
	ZZ	ZZ

OPN-3200i

	 @MENU_OPTO@ZZ@SO@ZZ@OTPO_UNEN@	SO
--	---	----

5.4.



	ZZ	ZZ
	Z1	Z1
	ZZ	ZZ

OPN-3200i

	 @VINJ_OPTO@Z@Z1@Z@OTPO_UNEM®	Z1
--	---	----

		ZZ	ZZ
		EBH	EBH
		EBI	EBI
		EBO	EBO
		EBP	EBP
		EBQ	EBQ
	100ms	_EBK_	EBK
	200ms	_EBL_	EBL
	400ms	_EBM_	EBM
	1000ms	_EBN_	EBN
		ZZ	ZZ

6.

Bluetooth HID


([4.2.1. Bluetooth](#))

Bluetooth

<TAB>

Bluetooth


2


* T E S T *

2013/04/17 05:06:36 0015 TEST 4.00V


SPP / MFi

OPN-3200i

	ZZ	_ZZ_	 <p><small>@MENU@OPTO@ZZ@BM@EBC@M@STM@I @SI D@I @RY@RZ@PS@I @SB@OV@1M@ZZ@OPTO@UNEM</small></p>
	BM1	_BM1_	
	EBC	_EBC_	
	MZ	_MZ_	
	\$TM	_\$TM_	
^ I (HT)	1I	_1I_	
ID	\$ID	_\$I D_	
^ I (HT)	1I	_1I_	
	RY	_RY_	
	RZ	_RZ_	
	PS	_PS_	
^ I (HT)	1I	_1I_	
	\$BV	_\$BV_	
V	OV	_OV_	
^ M (CR)	1M	_1M_	
	ZZ	_ZZ_	

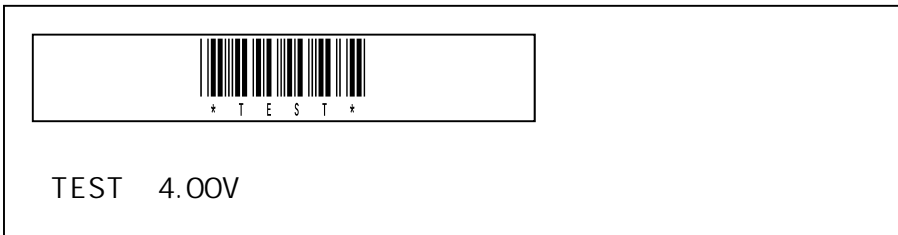
HID / HID-iDevice

OPN-3200i

	ZZ	_ZZ_	 <p> <small> @MENU_OPTO@ZZ@BM@EBC@M@STM@7H@SI D@7H@RV@RZ@PS@7H@SBM@OV@7I @ZZ@OPTO@LINE@ </small> </p>
	BM1	_BM1_	
	EBC	_EBC_	
	MZ	_MZ_	
	\$TM	_\$TM_	
TAB	7H	_7H_	
ID	\$ID	_\$I D_	
TAB	7H	_7H_	
	RY	_RY_	
	RZ	_RZ_	
	PS	_PS_	
TAB	7H	_7H_	
	\$BV	_\$BV_	
V	OV	_OV_	
RETERN	7I	_7I_	
	ZZ	_ZZ_	

4.0V


3.6V



SPP / MFi




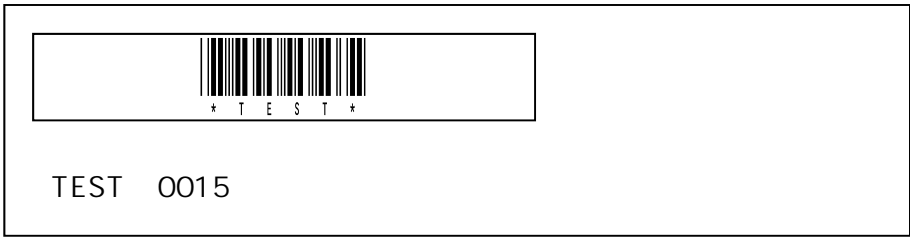
OPN-3200i

	ZZ	__ZZ__	 @MINI_OTP@ZZ@M@RY@RZ@PS@11@SBV@OV@1MZZ@OTPO_LINEM@
	MZ	__MZ__	
	RY	__RY__	
	RZ	__RZ__	
	PS	__PS__	
^ I (HT)	1I	__1I__	
	\$BV	__\$BV__	
V	OV	__OV__	
^ M (CR)	1M	__1M__	
	ZZ	__ZZ__	

HID / HID-iDevice

OPN-3200i


	ZZ	_ZZ_	 <code>@#NU_CPTO@ZZ@M@RY@RZ@PS@H@SBV@OV@I @ZZ@TPO_LNEM@</code>
	MZ	_MZ_	
	RY	_RY_	
	RZ	_RZ_	
	PS	_PS_	
TAB	7H	_7H_	
	\$BV	_\$BV_	
V	OV	_OV_	
RETERN	7I	_7I_	
	ZZ	_ZZ_	



SPP / MFi




OPN-3200i

	ZZ	_ZZ_	 <p>@MINI_CPTO@Z@V@R@Z@PS@I @S D@1M@Z@OTFO_L@N@M@</p>
	MZ	_MZ_	
	RY	_RY_	
	RZ	_RZ_	
	PS	_PS_	
^I (HT)	1I	_1I_	
ID	\$ID	_\$I D_	
^M (CR)	1M	_1M_	
	ZZ	_ZZ_	

HID / HID-iDevice

OPN-3200i

	ZZ	_ZZ_	 <p>@!N!U_OPTO@ZZ@M@R@R@Z@P@S@H@S!D@7! @ZZ@OTPO_UNEM@</p>
	MZ	_MZ_	
	RY	_RY_	
	RZ	_RZ_	
	PS	_PS_	
TAB	7H	_7H_	
ID	\$ID	_\$I D_	
RETERN	7I	_7I_	
	ZZ	_ZZ_	

Bluetooth HID

Bluetooth HID

0 ~ 10

1

	ZZ	<u> ZZ </u>
= 0	LA	<u> LA </u>
= 1	LB	<u> LB </u>
= 2	LC	<u> LC </u>
= 3	LD	<u> LD </u>
= 4	LE	<u> LE </u>
= 5	LF	<u> LF </u>
= 6	LG	<u> LG </u>
= 7	LH	<u> LH </u>
= 8	LI	<u> LI </u>
= 9	LJ	<u> LJ </u>
= 10	LK	<u> LK </u>
	ZZ	<u> ZZ </u>

7.

7.1.

7.2.

7.3.

7.1.

7.1.1. OPN-3200i

	CPU	32 bit CISC / 96 MHz	
	FROM	512 Kbyte + 32 KByte	
	SRAM	96 Kbyte	
	FROM ()	1 Mbyte	
		1 :	
	LED	2 2 () 1 2 ()	
		(3)	
		(3) 4	
I / F	Bluetooth		2402 2480 MHz
			Bluetooth Ver2.1
			10
			4 dBm
		Profile	SPP / HID
		WVGA (36) CMOS : 60 fps	
		LED × 2	
		LED × 1	
		36 (H: 752 × V: 480)	
		: 40.6° : 26.4°	
1D		UPC-A UPC-A Add-on UPC-E UPC-E Add-on EAN-13 EAN-13 Add-on EAN-8 EAN-8 Add-on JAN-8 JAN-13 Code 39 Tri-Optic NW-7 Industrial 2 of 5 Interleaved 2 of 5 S-Code IATA Code 93 Code 128 MSI/Plessey UK/Plessey Code 11 TELEPEN Matrix 2 of 5 Chinese Post Matrix 2 of 5 Korean Postal Authority code Intelligent Mail Barcode POSTNET JPN	
		Code 39: 0.1 mm	PCS 0.9

1D			16 mm (Codabar 0.15 mm 10) 20 mm (UPC 12)	PCS 0.9	
			100 mm Code 39 0.2 mm (: 155 mm)		
			2 m/ UPC 100% (: 100 mm)		
	(mm)	Code 39	(0.127)	60 95	
			(0.254)	45 185	
			(0.508)	50 250	
Code 128		(0.20)	65 150		
UPC	(0.33)	45 175			
GS1/Composite			GS1 DataBar GS1 DataBar Limited GS1 DataBar Expanded Composite GS1 DataBar Composite GS1-128 Composite EAN Composite UPC	GS1 DataBar: RSS	
			GS1 DataBar : 0.169 mm Composite Code : 0.169 mm		
2D			PDF417 MicroPDF417 Codablock F QR Code MicroQR Code Data Matrix (ECC 0 - 140 / ECC 200) MaxiCode (Modes 2 to 5) Aztec Code Aztec Runes Chinese-sensible code PLANET Netherlands KIX UK Postal Australian Postal	Codablock F Code 128	
			PDF417 : 0.169 mm QR Code : 0.169 mm Data Matrix : 0.212 mm	PCS 0.9	
	(mm)	PDF417	(0.169)	55 105	PCS 0.9
			(0.254)	35 155	
		QR Code	(0.212)	70 95	
			(0.381)	35 165	
Data Matrix	(0.254)	65 120			
		: ± 50°			
		: ± 50°			
		: ± 180°			
PCS		0.2		(MRD) 12%	

		1100 mAh (typ.)	
		24	10 Bluetooth (SPP)
()		5.0 6.5 V	
		1A	
		0 50	
		-20 60	
		20 85% RH	
		20 85% RH	
		10,000 lx	UPC 100% 75° 100 mm
		100,000 lx	
		10 100 Hz 19.6 m/s ² 1 60 X Y Z 1	
		150 cm 30 (6 5)	
		IP42	
LED		IEC 62471-1: 2006	Peak Wavelength 624 nm
		EN60950-1: 2005 IEC60950-1: 2006	
EMC		EN 55022: 2010 EN 301 489-1 V1.9.2 EN 301 489-17 V2.1.1 EN 300 328 V1.8.1 FCC Part 15 Subpart C , Subpart B ClassB VCCI B	
		CE	
		Bluetooth MFi	
		(): ± 15 kV	IEC: 61000-4-2
		(): ± 8 kV	
		() ± 6 kV	
		113.0(D) × 56.0(W) × 132.0(H) (mm)	
		132 g	

