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## **Revision History**

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## Preface

This document describes the correct operation method of the "ASR-P3xU Demo App" for Windows. Be sure to read this carefully before using the app.

If you have any comments or questions about this manual, please don't hesitate to get in touch with us at:

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## About the Demo App for ASR-P3xU

The "ASR-P3xU Demo App" (hereinafter referred to as "Demo App") is an application that customers can use together with our company's ASR-P3xU devices (hereinafter referred to as "P3xU"), including the P35U and P37U. Please download this application from the link below.

https://asreader.com/products/asr-p35u/?SDK

Note: The ASR-P3xU Demo App is a dedicated Demo App for ASR-P3xU devices.

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## **1.1.How to Connect P3xU to Windows device**

1. Switch the DIP Switches of the P3xU to "Serial mode" (1: OFF 2: ON)



FIG. 1-1-1 DIP Switch

 Connect the POWER/PC port of the P3xU and a Windows device using a USB-C cable. When the connection is successful, the LED will light up and it will beep twice.



FIG. 1-1-2 Connect the P3xU to a Windows device

## 1.2. Start the App

Double click "AsReaderP3xU\_Demo.exe".

AsReaderP3xU_Demo.exe	Double click
AsReaderP3xU_Demo.exe.config	
AsReaderP3xU_Demo.pdb	
AsReaderP3xU.dll	
AsReaderP3xU.pdb	

#### FIG. 1-2-1 Starting the app

The screen below is displayed after starting the app.

AsReaderP3xU 1.0.3					- 0
VCP COM Port COM6 V Search	h Baud Rate 115200bps	Connect Disconnect			1
Firmware Update					
FW Version Get Ver	HW Version Get Ver	RFID FW Version	Get Ver		
FW Files	Get Files Update RFID FW Files	Get Files	Update		
Basic Operation Tag HID Setting Other	Setting	Inventory Data			
Inventory Settings	Set Power Get Power	Start Tag Count 0	Inventory Round 0 Elapsed Time(s	ec) 0 RSS	SI(ON/OFF) ON OFF
	Set Read Time Get Read Time	Tag List	All Tag Count: 0	Flush	
Read Time:(10~40000ms)	Set Idle Time Get Idle Time	Index PC EPC	RSSI Data	Count	Total Singulation
Idle Time(0~40000ms)					Tatal Unious
REGION_US V	Set Region Get Region				0
~	Set Channel Get Channel				Total Duration (mc)
Frequency Automatic	Set Get				0
SESSION_S0 V	Set Session Get Session				Singulation Data (tage (see)
A v	Set Target Get Target				0
Q Start 0 V Min 0 V Max 0	Set Collision Get Collision				
OFF 🗸	Set Buzzer Get Buzzer				
- 0 (-99°0) Set RS	SI Threshold Get RSSI Threshold				
Default Setting	Basic Information				
Default Setting	SDK Version				
	5/14				

FIG. 1-2-2 Screen displayed after starting the app

Note: If the software is started before the P3xU is connected, the COM Port box may be empty. Click the "Search" button to get the COM Port.

COM Port 🗸 Search	VCP			Click
	COM Port	~	Search	

FIG. 1-2-3 Getting the COM Port

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## **1.3. How to Connect**

Select the correct COM Port, then click the "Connect" button to connect to the P3xU.

VCP		① Selec	t			2 Click
COM Port	COM6 ~	Search	Baud Rate	115200bps	Connect	Disconnect

#### FIG. 1-3-1 How to connect

The screen below is displayed once connected.

AsReaderP3xU 1.0.3										1
VCP COM Port COM6 Search Firmware Update FW Version 11.0.21 Get Ver H EW Elles	Baud Rate 1152	Get Ver	Connect RFID FW Version	Disconnect RED4S_v22.1_J	Get Ver	2023/03/20 2023/03/20 2023/03/20 2023/03/20 2023/03/20 2023/03/20 2023/03/20 2023/03/20	16:43:51 0x8e:GET 16:43:51 0x5c:GET 16:43:51 0x52:GET 16:43:51 0x54:GET 16:43:51 0x61:GET 16:43:51 0x62:GET 16:43:51 0x3:GET 16:43:51 0x63:GET	SELECTION ENAB FW VERSION HID WORK PARAN BUZZER RSSI THRESHOLD HW VERSION READER INFORMA PRODUCT_SN	LE IS TION	
Basic Operation Tag HID Setting Other Set	ting	RFID FW Files	Inventory Data	Get riles	opuate					
Inventory Settings	Set Power	Get Power	Start	Tag Count 0	Inventory	Round 0	Elapsed Tim	ne(sec) 0	RSSI(ON/OFF)   ON  O	FF
100	Set Read Time	Get Read Time	Tag List			All	Tag Count: 0	Flue	sh	
Read Time(10~40000ms) 400	Set Idle Time	Get Idle Time	Index PC	EPC		RSSI	Data	Count	Total Singulation	
Idle Time(0~40000ms) REGION_JAPAN v	Set Region	Get Region							Total Unique	
CHANNEL_33 922.4Mhz 🗸	Set Channel	Get Channel							0	
Frequency Automatic	Set	Get							Total Duration (ms)	
SESSION_S0 ~	Set Session	Get Session							0	
A/B v	Set Target	Get Target							Singulation Rate (tags	:/sec
FixedQ         V           Q Start         4         V         Max         4         V	Set Collision	Get Collision							0	
HIGH ~	Set Buzzer	Get Buzzer								
- 0 (-99*0) Set RSSI T	hreshold Get	RSSI Threshold								
Default Setting	Basic Information									
Default Setting	SDK Version 1.0.0									
	S/N KC00	1006								

FIG. 1-3-2 Connected successfully

## **1.4. How to Disconnect**

Click the Disconnect button to disconnect from the P3xU.

-VCP							Click
COM Port	COM6	$\sim$	Search	Baud Rate	115200bps	Connect	Disconnect

FIG. 1-4-1 How to disconnect



This page is for inventory. All parameters on this page are not saved.

## 2.1.Inventory

#### **Operating steps:**

- Set the Tag Count/Inventory Round/Elapsed Time of RFID tags that are supposed to be inventoried.
- 2. Set whether to display RSSI data of RFID tags or not.
- Click the "Start" button. Once clicked, the text on the button changes to "Stop" and the P3xU will start the inventory and display the data of the inventory in real-time. You can also start an inventory by pressing the SCAN button on the P3xU.
- 4. Click the "Stop" button (or press the P3xU SCAN button again) to stop the inventory.
- 5. Click "Flush" to clear all data in the Inventory Data area and the Notification area.

.nventory	/ Data	③ Click			Enter		② Select
Star	rt	Tag Count 0	Inventory Round 0	Elapsed Ti	me(sec) 0	RSSI (ON/OFF) 💿 ON 🔿 OFF	
Tag List	:		Al:	L Tag Count: O	Flus	sh	
Index	PC	EPC	RSSI	Data	Count	Total Singulation 0 Total Unique 0 Total Duration (ms) 0 Singulation Rate (tags/sec) 0	





St	op	Tag Count 0	Inventory	Round 0	Elapsed Time(s	ec) O	RSSI	(ON/OFF)	🖲 ON 🔾 OFF
z Lis	st.			A11	Tag Count: 5	F	lush	5	
Index	PC	EPC		RSSI	Data	Count		]	
	2400	221111700000200	200222017	-62 4		7			
	3400	2211117000000200	.EUCFE617	-62.4		10		-	
	3400	12342222333334444	55551111	-54.4		16			
3	3000	£280689400004005	5AU5AC61	-38.0		13		Total Si	ingulation
ł	3400	E280117000000200	EOCDBOB4	-64.8		3		42	
;	3400	3670770033334444	EOCFC457	-63.7		3			
								Total Ur	nique
								5	
								Total Du	uration (ms)
								0.404	2
								2400	U
								1	
								Singulat	tion Rate (tags/sed
								17 9	5
								1	-
								-	
								-	
								-	
				_	•			Noti	fication Area
AsReader DP	P3xU 1.0.3			-	-	2023/03/20 16:53:31	0x8aSTART		fication Area
AsReader >P ⊃M Port	P3xU 1.0.3	Search Baud Rate	1152006ps	Correct	Disconnect	2023/03/20 18-53-31	0x8aSTART	Notif	fication Area
\sReader >P OM Port ™ware Up	P3xU 1.0.3 COM6 date	V Search Baud Rate	115200bps	Connect RFID FW Version	Disconnect RED45,v221,J Get Ver	2023/03/20 1653-31	0x3aSTART_	Notif	fication Area
AsReader OP OM Port rmware Up W Version W Files	P3xU 1.0.3 COM6 [1.0.21	Gesrch Baud Rate     Get Ver HW Version 11     Ver Files 1	115200bps 12 Get Ver Jodate RFID FW Files	Connect RFID FW Version	Disconnect RED4S_v221.J Get Ver	2025/03/20 16:58:81	0x8eSTART_	Notif	fication Area
sReader iP )M Port mware Up ∤ Version / Files	P3xU 1.0.3 COM6 date	V Search Baud Rate	1152006ps 12 Get Ver Jødate RFID FW Files	Connect RFID FW Version	Disconnect RED4S_v221_J Get Ver v Get Files Update	2028/03/20 1665331	0x8eSTART_	Notif	fication Area
AsReader >P OM Port mware Up # Version # Files sic Oper	P3xU 1.0.3 COM6 idate 1.0.21 cation Tag HI	Search Baud Rate     Get Ver HW Version II     Get Files t  D Settine Other Settine	115200bps 2 Get Ver Jpdate RFID FW Files	Connect RFID FW Version Inventory Data	Disconnect RED45_v221_J Get Ver Get Files Update	2023/03/20 1653-31	0x8eSTART_	Notin	fication Area
AsReader OP OM Port Trimware Up W Version W Files isic Oper inventory S	P3xU 1.0.3 COM6 date 1.0.21 cation Tag HI Settings	Search Baud Rate Get Ver HW Version 116 Get Files L D Setting Other Setting	115200bps 12 Get Ver Ipdate RFID FW Files	Consect RFID FW Version Inventory Data Stop	Disconnect RED45_v221_J Get Ver Get Files Update Tae Count 0 Inventory 1	2023/03/20 1653:81	0x8aSTART_	AUTO, READ, EX2	fication Area
AsReader CP XOM Port W Version W Files asic Oper Inventory S 13	P3xU 1.0.3 COM6 date 1.0.21 cation Tag HI Settings	Search Baud Rate Get Ver HW Version III Get Files D Setting Other Setting Set Powe	115200bps 12 Get Ver Jpdate RFID FW Files ar Get Power	Connect RFID FW Version Inventory Data Stop	Disconnect RED45_v221_J Get Ver V Get Files Update	2023/03/20 16:53:31	0x8aSTART_	AUTO, READ, EX2	fication Area
AsReader CP COM Port irmware Up W Version W Files asic Oper Inventory S 13	P3xU 1.0.3 COM6 date [1.0.21 cation Tag   H] Settings	Search Baud Rate Get Ver HW Version II Get Files I D Settine Other Settine Set Powe Set Powe Set Powe	115200bps 12 Get Ver Jpdate RFID FW Files ar Get Power ime Get Read Time	Connect RFID FW Version Inventory Data Stop Teg List	Disconnect RED4S_v221_J Get Ver Get Files Update Tag Count 0 Inventory I	2025/03/20 1665331 Round 0 EI All Tag Cou	0x8aSTART_ apsed Time(s nt 9	Noti AUTO_READ_EX2 he) 0 1	fication Area
AsReader SP OM Port W Version nventory S 13 100 2ead Time 100	P3xU 1.0.3 COM5 sdate [1.0.21 sation Tag: HI settings	V Search Baud Rate Qet Ver HW Version II Qet Files Q D Setting Other Setting Set Pow Set Read T Set Alle T Set Alle T	115200bpe 12 Get Ver Apdate RFID FW Files ar Get Read Time me Get Read Time	Connect RFID FW Version Inventory Data Stop Tag List Index PC	Disconnect Disconnect RED45_v22.1_J Get Ver Get Files Update Tag Count I Inventory I EPC EPC	2025/03/20 16:58:81 Round 0 EI All Tag Cou	0x8aSTART_ apsed Time(s nt 9	Notif AUTO_READ_EX2 he) 0 1 EBust Count	fication Area
AsReader DM Port mware Up V Version W Files sic Oper ventory S 3 00 00 lead Time 00	P3xU 1.0.3 COM6 sdate [1.0.21 [ sation Tag   H] Sattings (10°40000ms) 0°40000ms)	Get Ver HW Version 10 Get Ver HW Version 10 V Get Files 1 D Settine Other Settine Set Pow Set Read 1 Set Idle Ti	1152006ps 12 Get Ver Jodate RFID FW Files ar Get Power ime Get Read Time me Get Idle Time	RFID FW Version  RFID FW Version  Inventory Data  Stop  Tag List  Index PC  1 3400  2 3400	Disconnect Disconnect RED45_v22.1_J Get Ver Get Files Update Teg Count 0 Inventory 1 EPC E28011700000020CE0CE854 E28011700000020CE0CE854	2023/03/20 16:53:31 20und 0 EL All Tag Cou PSSI Dete -56.8	0x8aSTART_ apsed Time(s nt 9	Noti: AUTO_READ_EX2 sc) 0 0 FAuff 5 12	fication Area
AsReader 2P DM Port wwware Up V Version V Files sic Oper vertory S a 00 00 1/2 kead Time (Capon, J	P3xU 1.0.3 COM6 sodate [1.0.21 [ solation Tag   H] Solations (10"40000ms) APAN	Search Baud Rate     Get Ver HW Version 116     Get Files 1  D Settine Other Settine     Set Read 1  Set Ide T  Set Read 1	1152006ps 12 Get Ver Jodate RFID FW Files er Get Read Time me Get Idle Time on Get Region	RFID FW Version  Inventory Data  Stop  Tee List Index PC  1 3400  2 3400  3 34	Disconnect Disconnect RED45_v22.1_J Get Ver Get Files Update Tag Count  Proc RED170000020CE0CE8854 RE3801170000020CE0CE8854 RE3801170000020CE0CF8654 RE38011700000000CE0CF8654 RE380117000000000CE0CF8654 RE38011700000000CE0CF8654 RE38011700000000000E0CF865 RE380180 RE3801 RE3801 RE380 RE38 RE3	2023/03/20 165331 2023/03/20 165331 30und 0 El All Tag Cou PSSI Data -55.8 -51.4 -55.4	0x8aSTART_ apsed Time(s nt 9	Notis AUTO_READ_EX2 AUTO_READ_EX2 AUTO_READ_EX2 Float 12 22 19	fication Area - - - - - - - - -
sReader P DM Port W Version / Files ite Oper ventory S 3 000 lead Time 0 le Time(( EGION_J) HANNEL	P3xU 1.0.3 COM6 date [1.0.21 (10°40000me) APAN 38 922.4Mhz	Set Ver HW Version 112 Get Ver HW Version 112 Get Files C D Settine Other Settine Set Read 1 Set Xele Tr Set Xele Tr Set Zele	115200bps 12 Get Ver kpdate RFID FW Files ar Get Read Time me Get Kead Time an Get Kegion nel Get Channel	RFID FW Version Inventory Data Stop Tag List Index PC 1 9400 2 8400 2 8400 4 8400 4 8400	Disconnect           RED45_v22.1_J           Get Files           Update             Tae Count III             Tae Count IIII             EPC           E2801170000020CEDCE6854           E2801170000020CEDCE9C744           E2801170000020CEDCE9C7444           E2801170000020CEDCE9C7444           E2801170000020CEDCE9C7404	2023/03/20 1653:81 2023/03/20 1653:81 30und 0 EI All Tag Cou PSSI Data -56.8 -56.8 -56.8 -56.8 -56.8	0x8aSTART_	Notis	fication Area
sReader P IM Port I Files ic Operation ic Op	P3xU 1.0.3 COM6 [10,21 [10,21 [10,21 [10,21 [10,21 [10,21]	Set Ver  HW Version  Get Ver HW Version  Get Files  D Settine  Set Read  S	115200bps 12 Get Ver Apdate RFID FW Files ar Get Read Time me Get Read Time me Get Read Time an Get Read Time an Get Read Time an Get Read Time	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index         PC           2         3400           2         3400           4         3400           5         3400           5         3400           5         3400           5         3400	Disconnect Disconnect RED45_v221_J Get Ver Get Files Update Tag Count EPC E2801170000020CE0CE854 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E2801170000020CE0CE9044 E280117000020CE0CE9044 E280117000020CE0CE9044 E280117000020CE0CE9044	2025/03/20 16:53:31 2025/03/20 16:53:31 20000 0 EI All Tag Cou PSSI -55:8 -55:8 -55:8 -55:8 -55:8 -55:8 -55:2 -67:7	0x8aSTART_ apsed Time(s nt 9	Notin AUTO_READ_EX2 AUTO_READ_EX2 bc) 0 1 Float 12 12 19 11 11 15 9	fication Area
IssReader P MM Port W Version V Files sic Oper sead Time Read Time Read Time ( 2) HANNEL ] Frequen	P3xU 1.0.3 COM5 xdate [1.0.21 cation Tag: H1 settings x(10°40000me) 0°40000me) APAN 38 9224Mhz ccy Automatic 50	v     Search     Baud Rate       Qet Ver     HW Version     III       v     Get Files     I       D Setting     Other Setting       Set Read       Set Kile T       v     Set Read       v     Set Read       v     Set Chara       v     Set Chara       v     Set Chara       v     Set Set Chara	115200bpe 12 Get Ver 12 Get Ver 12 Get Power 13 Get Read Time 14 Get Kead Time 15 Get Charnel 16 Get Charnel 16 Get Scenim	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index PC           1 3460           3 400           5 3400           7 3400           7 3400	Disconnect           RED45_v221_J         Get Ver           Get Files         Update           Tae Count         Inventory           EPC         E2801170000020CEDCE9C74           E2801170000020CEDCF944         E2801170000020CEDCF944           E2801170000020CEDCF944         E2801170000020CEDCF944           E2801170000020CEDCF944         E2801170000020CEDCF944           E2801170000020CEDCF944         E280117000020CEDCF944	2025/03/20 16:58:81 2025/03/20 16:58:81 2020 2020/03/20 16:58:81 2020 2020/03/20 16:58:81 2020 2020/03/20 16:58:81 2020/03/20 16:58:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 16:58 2020/03/20 2020/03/20 2020/03/20 2020/03/20 2020/03/2	0x8aSTART_ apsed Time(s nt 9	Notin AUTO_READ_EX2 AUTO_READ_EX2 bc) 0 Flash Count 5 2 2 2 2 2 19 11 15 9 13	fication Area
sReader P IMI Port mware Up V Files ic Oper wentory S 3 0 ead Time EGION_J I Fraques ESION_Z 7 2	P3xU 1.0.3 COM5 Sodate [1.0.21 (ation Tag: HI Settings (10°40000me) 0°40000me)	Search Baud Rate  Get Ver HW Version II  Get Ver HW Version II  Get Files t  D Setting Other Setting  Set Read 1  Set Idle T  Set Idle T  Set Chara Set	115200bps 12 Get Ver Ipdate RFID FW Files ar Get Power ime Get Read Time me Get Idle Time on Get Region lel Get Charnel Get Control	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index         PC           1         3400           3<3400	Disconnect           Disconnect           RED45,v221,J           Get Ver           Get Files           Update           Tae Count           Inventory I           EPC           E2801170000020CE0CE0584           E2801170000020CE0CF044	2023/03/20 16:53:31 30und 0 El All Tag Cou PSSI Deta -61.6 -51.4 -55.8 -55.8 -55.8 -55.2 -60.7 -55.0	0x8sSTART_ apsed Time(s nt 9	Noti: AUTO_READ_EX2 AUTO_READ_EX2 ac) 0 1 Fluat 5 12 22 19 11 15 9 18 8	fication Area
AsReader pp DM Port www.eut. V Version V Versi	P3xU 1.0.3 COM6 idate [1.0.21 [ ration Tag   H] Settings (10°40000ms) APAN 33 922.4Mez kcy Automatic 50	Seturch     Baud Rate       Get Ver     HW Version       V     Get Files       V     Get Files       D Settine     Other Settine       Set Read 1       Set Idle Till       Set Idle Till       Set	1152006ps         12       Get Ver         Jpdate       RFID FW Files         ar       Get Read Time         me       Get Kile Time         on       Get Region         et       Get Session         et       Get Target	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index PC           1           3           <	Disconnect           RED45_v22.1_J           Get Ver           Get Files           Update           Tag Count           Inventory I           EPC           E2801170000020CE0CE05854           E2801170000020CE0CE05854           E2801170000020CE0CF0444	2023/03/20         16:53:31           20und         0         EI           All Tag Court         PSSI         Date           -65.8         -51.4         -55.8           -55.8         -55.2         -60.7           -55.0         -55.0         -55.0	0x8aSTART_ apsed Time(s nt 9	Noti: AUTO_READ_EX2 AUTO_READ_EX2 ac) 0 0 FLAB 5 5 5 10 11 15 9 13 8 8	fication Area
AsReader CP OM Port irmware Up W Version W Vies inwentory SS Market Mark	P3xU 1.0.3 COM6 sodate [1.0.21 (10"40000ms) AFAN 33 9224Mhz kcy Automatic 50	Search     Baud Rate       Get Ver     HW Version       Get Files     L       D Settine     Other Settine       Set Read     Set Read       Set Set Chara     Set Tare       V     Set Tare       V     Set Collis	1152000ps         12       Get Ver         Jpdate       RFID FW Files         ar       Get Power         ime       Get Read Time         me       Get Idle Time         on       Get Region         Get Session       Get Tareet         ime       Get Tareet         ime       Get Collision	Connect           RFID FW Version           Inventory Data           Tae List           Index         PC           1         3400           3         3400           4         3400           5         3400           6         3400           9         3400	Disconnect           RED45_v221_J           Get Ver           Get Files           Update           Tag Count           Tag Count           B           Inventory I           E2801170000020CEDCER854           E2801170000020CEDCER6844           E2801170000020CEDCER644	2023/03/20 165331 2023/03/20 165331 2023/03/20 165331 All Tag Cou PSSI Data -56.8 -51.4 -55.8 -5	0x8aSTART_	Notis AUTO_READ_EX2 AUTO_READ_EX2 AUTO_READ_EX2 EX2 EX2 B B B B B B B B B B B B B B B B B B B	fication Area -
AsReader PDM Port mware Up Port W Version W Version action of the second action of	P3xU 1.0.3 COM6 I.0.21 Tation Tae, HI Settings (10°400000ms) APAN 33 922.4M%z key Automatic 50	Search     Baud Rate       Get Ver     HW Version       It     Get Files       D Settine     Other Settine       Set Read     Set Read       Set Read     Set Read       Set Set Seesi     Set Target       V     Set Target       V     Set Target       V     Set Collis       V     Set Collis	115200bps 12 Get Ver Apdate RFID FW Files ar Get Read Time me Get Kale Time on Get Region Get Channel Get Get Channel Get Get Collision	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index         PC           1 3400           2 3400           4 3400           5 3400           6 3400           8 3400           9 3400	Disconnect           RED45_v22.1_J           Get Ver           Get Files           Update           Tag Count           B           Inventory I           EPC           E2801170000020CE0CE6854           E2801170000020CE0CE644           E2801170000020CE0CF044           E2801170000020CE0CF044           E2801170000020CE0CF043           E2801170000020CE0CF043           E2801170000020CE0CF043	2022/03/20 16:53:31 2022/03/20 16:53:31 2022/03/20 16:53:31 All Tag Cou POSIS -55:8 -55:9 -55	0x8aSTART_	Notin AUTO_READ_EX2 AUTO_READ_EX2 ac) 0 1 Count 5 12 12 19 11 15 9 13 8	fication Area -
sReader P M Port mware Up V Friles ic Opper ic Opp	P3xU 1.0.3 COM5 sdate [10.21 ation Tag: HI Settings <(10°40000ms) APAN 33 9224Mrz kcy Automatic 50	V     Search     Baud Rate       Get Ver     HW Version     IX       V     Get Files     L       D Settine     Other Settine       Set Set Read       Set Idle T       Set Set Sessi       V       Set Read       Set Set Tare       V       Max       V       Set Buzz	115200bps 12 Get Ver 12 Get Ver 12 Get Power 13 Get Read Time 14 Get Read Time 15 Get Read Time 16 Get Color 16 Get Get Session 16 Get Get Target 10 Get Collision 17 Get Buzzer	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index PC           St00           3 400           5 3000           6 3400           7 3400           9 3400	Disconnect           RED45_v22.1_J         Get Ver           Cet Files         Update           Tae Count         Inventory I           EPC         E28011700000220:EDCE9C4           E28011700000220:EDCE9C4         E28011700000220:EDCF944           E28011700000220:EDCF944         E28011700000220:EDCF944           E28011700000220:EDCF944         E28011700000220:EDCF944           E28011700000220:EDCF944         E28011700000220:EDCF944	2023/03/20 16:53:81 3ound 0 El All Tag Cou PSSI Date 55.8 55.	0x8aSTART_ apsed Time(s nt 9	Notin AUTO_READ_EX2 AUTO_READ_EX2 bc) 0 Fluit 12 22 11 15 9 11 15 9 11 8 8	fication Area
ISReader P DM Port Invare Up V Version V Version Version Sic Oper Sic Oper Isson 00 Ist Time( EGDN_J) Ist Time( EGDN_J) Ist Time( Isson Start I Ist I Ist Ist I Ist Ist I Ist Ist I Ist Ist I Ist Ist I Ist Ist	P3xU 1.0.3 COM5 sidate [1.0.21 sation Tag: HI sation Tag: HI satings (10°40000me) 0°40000me) 0°40000me) 0°40000me) 0°40000me) 0°40000me) 0°40000me) 0°40000me) 0°40000me) 10°4000me) 10°400me) 10°4000me) 10°4000me) 10°4000me) 10	Yearch     Baud Rate       Get Ver     HW Version       Get Files     L       V     Get Files       D Setting     Other Setting       Set Read     Set Read       Set Set Set     Set Read       V     Set Read       V     Set Read       V     Set Set Set       V     Set Charr       V     Set Targe       V     Set Read       V     Set Collis       V     Set Resi       Set Resi     Set Buzz       Set RESI Threshold     Set Resi	115200bps 2 Get Ver Jpdate RFID FW Files ar Get Read Time me Get Alle Time me Get Alle Time me Get Alle Time Get Channel Get Connel Get Session et Get Target ion Get Reading Get Collision er Get Roszer Get RSSI Threshold	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index PC           1 3400           3 8400           5 3400           7 3400           9 3400	Disconnect           RED45_v221_J           Get Ver           Get Files           Update           Tae Count           EPC           E2801170000020CEDCE05874           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044           E2801170000020CEDCF044	2023/03/20 1653:31 Round 0 EI All Tag Cou PSSI Data -56.8 -55.8 -55.8 -55.8 -55.9 -55.0 -57.7 -56.0	0x8sSTART_ apsed Time(s nt 9	Noti:	fication Area -
IsReader P DM Port Imware Up V Version W Files Sic Oper Sic	P3xU 1.0.3 COM5 index		1152006ps 12 Get Ver Jpdate RFID FW Files ar Get Power Time Get Read Time me Get Idle Time me Get Idle Time me Get Idle Time Get Charnel Get Collision et Get Buzzer Get RSSI Threshold tion	Connect           RFID FW Version           Inventory Data           Index           PC           1 s400           3 s400           5 s400           7 s400           9 s400           9 s400	Disconnect           Disconnect           RED45_v221_J           Get Ver           Get Files           Update           Tee Count           Inventory I           EPC           E2801170000020CE0CE05854           E2801170000020CE0CE0584	2023/03/20 16:53:81 3ound 0 El All Tag Cou PSSI Data -61.6 -51.4 -55.8 -51.4 -55.8 -55.2 -60.7 -55.0 -55.0 -55.0	0x8eSTART_ apsed Time(s nt 9	Noti:	fication Area
AsReader SP OM Port Imware Up W Version W Files Isic Operatory S Towardory S	P3xU 1.0.3 COM6 Sdate [1.0.21 [ ation Tag   H] Sattings ation Tag   H] Sattings ation Tag   H] Sattings ation Tag   H] (10*40000ms) APAN 39 9224Mhz key Automatic 50 [ (-99*0) tting t Setting	Search     Baud Rate       Get Ver     HW Version       Get Files     L       V     Get Files       D Settine     Other Settine       Set Read 1     Set Read 1       Set	1152006ps         12       Get Ver         Jodate       RFID FW Files         ar       Get Red Time         me       Get Red Time         on       Get Region         et       Get Channel         Get       Get         on       Get Session         et       Get Target         ion       Get Buzzer         Get RSSI Threshold       Jon	Connect           RFID FW Version           Inventory Data           Stop           Tag List           Index PC           1           3 4000           3 4000           5 3400           5 3400           9 3400           9 3400	Disconnect           RED45_v221.j           Get Ver           Get Files           Update           Tag Count           EPC           E2801170000020CE0CE05854           E2801170000020CE0CE05854           E2801170000020CE0CE0584           E2801170000020CE0CF044           E2801170000020CE0CF044           E2801170000020CE0CF044           E2801170000020CE0CF043           E2801170000020CE0CF043	2023/03/20 16:53:31 2023/03/20 16:53:31 2023/03/20 16:53:31 All Tag Cou PSSI Data -01.6 -01.6 -55.8 -55.7 -56.9 -57.7 -56.0 -57.7	apsed Time(s nt 9	Noti:	fication Area

FIG. 2-1-1 Inventory

Fields	Descriptions
Index	The sequence number of data
PC	PC bank of RFID tag
EPC	EPC bank of RFID tag
RSSI (dBm)	The signal strength of the RFID tag for the last inventory
Data	Data returned after the Read operation is performed on the
	Operation Tag page
Count	The count of the RFID tag reading

The descriptions of the fields in the Tag List:

The descriptions of the fields in the Inventory Results:

Fields	Descriptions					
All Tag Count	Number of RFID tags in inventory (counting only once if the					
	same tags are repeatedly inventoried)					
Total Singulation	Total inventory times (if the same tag is repeatedly					
	inventoried, each count will be counted)					
Total Unique	Number of RFID tags in inventory (counting only once if the					
	same tags are repeatedly inventoried)					
Total Duration (ms)	The inventory duration after each click of the "Start" button.					
	(Unit: ms. (milliseconds))					
Singulation Rate	Inventory speed Unit: "number of tags per second"					
(tags/sec)	inventory speed, onte number of tags per second					

Note: If the data save path is set in advance, the RFID tag data will be automatically saved when clicking the "Stop" button to stop the inventory each time. If the data save path is not set, the inventory data will not be saved when the inventory is stopped. (For details about how to set the data save path, see <u>6.1 Export Path</u>.)

## 2.2. Tag Count

Tag Count: Configure the upper limit of the number of RFID tags to inventory. The inventory automatically stops when the set number of RFID tags is inventoried. Value range: 0 to 255. 0 means "No limit of tags to inventory"

Tag Count O	Inventory Round	0	Elapsed Time(sec) 0	RSSI(ON/OFF)	🖲 ON 🔾 OFF

FIG. 2-2-1 Tag Count

## 2.3. Inventory Round

Inventory Round: Configure the upper limit of the number of query cycles. The inventory automatically stops when the set number of inventory rounds is reached.

Value range: 0~65535. 0 means "No limit to the number of query cycles"



FIG. 2-3-1 Inventory Round

## 2.4. Elapsed Time

Elapsed Time: Configure the upper limit of the inventory time. The inventory automatically stops when the set duration is reached.

Value range: 0~255. 0 means "No limit on the duration of the inventory"

Tag Count 0	Inventory Round	0	Elapsed Time(sec) 0	RSSI (ON/OFF)	💿 on 🔿 off

FIG. 2-4-1 Elapsed Time

## 2.5.RSSI

Select whether to display the signal strength of RFID tags during the inventory.

ON: display

OFF: hide

Tag Count	0	Inventory Round	0	Elapsed Time(sec)	0	RSSI (ON/OFF)	● ON ○ OFF	

#### FIG. 2-5-1 RSSI

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This chapter describes how to set RFID-related parameters and the volume of beep sounds. All parameters on this page are saved in the P3xU.

### 3.1.Power

Set/Get the output power of the P3xU (dBm). In general, the larger the value of power is set, the farther the reading distance is.

The available settings of the power vary by region or country.

Japan: 13~23dBm (20~200mW)

Most other regions/countries: 13~27dBm (20~500mW)

23	Set Power	Get Power

FIG. 3-1-1 Power

## 3.2. Read Time

Set/Get the duration of the radio waves emitted when the RFID tags are being inventoried.

The longer the Read Time is, the faster the inventory is.

Value range: 10~40,000ms.

100	Set Read Time	Get Read Time
Read Time: (10~40000ms)		



## 3.3. Idle Time

Set/Get the duration of time to stop emitting the radio waves when the RFID tags are being inventoried.

Value range: 0~40,000ms.

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400	
Idle	Time:(0~40000ms)

Set Idle Time Get Idle Time

Get Region

FIG. 3-3-1 Idle Time

**Note:** Under the laws of various countries on the use of radio waves, the Read Time and the Idle Time should be set according to the following table.

Regulations	Inventory Time	Idle Time
Radio law (JP)	Not more than 4000ms	Not less than 50ms
FCC (US)	Not more than 400ms	Not less than 20ms
CE (EU)	Not more than 4000ms	Not less than 100ms

## 3.4. Region

Set/Get the region (or country).



FIG. 3-4-1 Region

## 3.5. Channel

Set/Get the channel.

When Frequency Automatic is selected, this setting is not available.

CHANNEL_24 920.6Mhz $\sim$	Set Channel	Get Channel
🗹 Frequency Automatic	Set	Get

When Frequency Automatic is not selected, this setting is available.

CHANNEL_24 920.6Mhz $\sim$	Set Channel	Get Channel
Frequency Automatic	Set	Get

FIG. 3-5-1 Channel

## **3.6. Frequency Automatic**

Set/Get Frequency hopping/fixed frequency.

Frequency hopping: Randomly select frequencies from the frequency list corresponding to the current frequency band for inventory

to the current frequency band for inventory

Fixed frequency: Use a specific frequency for the inventory

```
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```

CHANNEL_24 920.6Mhz $\sim$	Set Channel	Get Channel
🖂 Frequency Automatic	Set	Get

#### FIG. 3-6-1 Frequency Automatic

## 3.7. Session

Sets/Gets Session.

SESSION_SO V	Set Session	Get Session
--------------	-------------	-------------

#### FIG. 3-7-1 Session

"Session" and "Target" can be set to adjust the response time of RFID tags. (Response time varies with RFID tag specifications.)

Please set parameters according to the number of RFID tags to be inventoried referring to the following table.

Session Target	SO	S1	S2/S3
A	The RFID tags that have been inventoried will immediately become ready	The RFID tags that have been inventoried cannot be inventoried again	The RFID tags that have been inventoried cannot be inventoried again within
	receiving the radio waves.	after being inventoried.	inventoried.
В	RFID tags in the initial state cannot be inventoried.	The same as S0.	The same as S0.
A/B	The RFID tags that have been inventoried will immediately become ready to be inventoried again after receiving the radio waves.	The same as S0.	The same as S0.

## 3.8.Target

Set/Get Target.

A/B ~ Get Target Get Target



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## 3.9. Collision

Set/Get Collision parameters.

**Q:** The number of the slots used by the anti-collision algorithm is equal to  $2^{Q}$  and whether the Q value is fixed is up to the user.

• Setting Fixed Q

FixedQ			$\sim$					
Q Start 4	∨ Min	4	$\sim$	Max	4	$\sim$	Set Collision	Get Collision

FIG. 3-9-1 Fixed Q

**Fixed Q:** Q is fixed when inventorying.

**Q Start:** Specify a Q value if Fixed Q is selected.

• Setting Dynamic Q

DynamicQ	$\sim$				
Q Start 4 v Min 0	√ Max	8	$\sim$	Set Collision	Get Collision

#### FIG. 3-9-2 Dynamic Q

Dynamic Q: The Q value changes within a given range during the inventory.

Min: In the case of Dynamic Q, specify the minimum value of Q.

Max: In the case of Dynamic Q, specify the maximum value of Q.

Note:

- If Dynamic Q is set, the value of Q must meet the following conditions: Min ≤ Q Start ≤ Max.
- 2) If Dynamic Q is set, the Min, the Q Start, and the Max cannot be set to the same value (automatically set to Fixed Q).

## 3.10. Buzzer

Set/Get the beep sounds setting. This setting can be set to High, Low, or Off. When it is turned on, the P3xU will beep at the set volume at the following times:

- a) When the P3xU is turned on
- b) When the P3xU inventories RFID tags
- c) When an RFID tag is read, written, locked, or killed

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	[]	high 🗸 🗸		Set Buzzer	Get Buzzer
--	----	----------	--	------------	------------

FIG. 3-10-1 Buzzer

## 3.11. RSSI Threshold

When the tag RSSI value (signal strength) is lower than the set RSSI Threshold value, the tag data will not be received.

Default value: 0

Value range: -99~0

For example, when -60 is entered, the tag data is not displayed in the tag list if the RSSI value is less than -60.

- 0	(-99~0)	Set RSSI Threshold	Get RSSI Threshold

FIG. 3-11-1 RSSI Threshold

## 3.12. Default Setting

Click this button to restore some parameters to factory defaults. The following parameters can be restored: (1) All parameters on the Basic page. (2) All parameters on the HID Setting page.



FIG. 3-12-1 Default Setting

## **3.13. Basic Information**

Once connected to P3xU, the SDK version and serial number of P3xU are displayed in this area.

Basic Information								
SDK Version	1.0.0							
S/N	KC00006							

FIG. 3-13-1 Basic Information

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This section is focused on setting RFID tag Mask parameters and executing RFID tag read, write, lock, kill, and other operations. All parameters on this page are not saved.

## 4.1. Selecting Tag

When inventorying a large number of tags, you can set Mask parameters to inventory only specific RFID tags.

**Operating steps:** 

• Setting the Mask parameters:

Example: Inventorying only the RFID tags starting with "E280" in the EPC area.

- 1. Select a memory bank: EPC.
- 2. Enter the value to be picked up (Mask): E280.
- 3. Enter the Start Address: 2.
- 4. Select a Target: SESSION\_S0.
- 5. Select an Action: ACTION\_ASLINVA\_DSLINVB.
- 6. Click the "Set Selection" button.
- 7. Set Target to A on the Basic page.



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#### Note:

- 1) The "Target" on the Operation Tag page and the "Session" on the Basic page must be set to the same value when selecting tags to read.
- 2) When EPC is selected for the memory bank, the start address is0 for CRC, 1 for PC, and 2 for the EPC area.
- 3) The Reserved area does not support Mask.

#### • Inventorying only selected RFID tags:

- 1. Set Selection Enable to Enable.
- 2. Click the "Set" button to complete the settings.
- 3. Click the "Start" button to inventory RFID tags (or execute Read, Write, Lock, Kill and other operations), and only the RFID tag data that meets the Mask conditions will be displayed.

Basic Operation Tag HID Setting	Inventory Data			
C RESERVED   EPC   TID   USER	Start Tage 3 Click	Elapsed Time(	sec) 0 RSS	I(ON/OFF)
Mask E280	Tag List	All Tag Count: 0	Flush	
Start Address(Word) 2	PC EPC	RSSI Data	Count	
Target SESSION_SO 1 Sele	ct			Total Singulation
Selection Enable ENABLE Set Get				0
Write/Read/Kill Tag	② Click			Total Unique
Write Memory(Hex)				0
Start Address 0 Read				Total Duration (ms)
Password(Hex) 00000000 Kill				Singulation Rate (tags/sec)
Lock Tag				0
Kill       Access       EPC       TID       User         Mask				



invento	ry Data					
St	op	Tag Count 0 Inventory	v Round 0	Elapsed Ti	me(sec) 0	RSSI (ON/OFF)  ON OFF
Tag Li:	st		All	Tag Count: 3	Flu	sh
Index	PC	EPC	RSSI	Data	Count	
1	3400	E280, 1700000020CE0CFC438	-50.8		33	
2	3400	E28022223333444455551111	-42.5		34	
3	3000	E2806894000040055A05AC61	-34.1		31	Total Singulation
						98
						Total Unique
						3
						Total Duration (ms)
						4688
						1000
						Singulation Rate (tags/sec)
						20.9
						20.0

FIG. 4-1-2 Inventorying RFID tags

## 4.2. Select a Tag to Read / Write / Lock / Kill

To execute Read, Write, Lock, and Kill, you must select a single RFID tag to be executed. Below is an example of how to select.

- 1. Click the "Start" button to start inventorying RFID tags.
- 2. Click the "Stop" button to stop the inventory.
- 3. Click a Tag displayed in the Tag List.
- 4. At this point, the EPC of this RFID tag is displayed in the Mask text box. Subsequent operations such as read, write, lock, and kill will only be executed on the selected RFID tag.

lag List		All Ta	g Count: O	Flush	
Index PC	EPC	RSSI 1	Data	Count  Count Count  Count  Count  Count Count  Count  Count  Count Count  Count  Count Coun	Total Singulation 0 Total Unique 0 Total Duration (ms) 0 Singulation Rate (tags/se 0

Tag Li	st		All	Tag Count: 5	Flu	sh
Index	PC	EPC	RSSI	Data	Count	
1	3400	3670770033334444E0CFC457	-38.5		7	
2	3000	E2806894000040055A05AC61	-34.0		7	
3	3000	3035A754BC4465C000000008	-47.2		7	Total Singulation
4	3400	E28011700000020CE0CFC438	-31.9		7	24
5	3400	E28022223333444455551111	-42.9		6	34
						Total Unique
						-
						5
						Total Duration (ms)
						3038
						0.000
						Singulation Rate (tags/sec
						8.6
						0.0





Basic Operation Tag	HID Setting	ſ	Towentor	ry Data					
O RESERVED	CTID OUSER	④ Display	S+4		Tog Count 0 Townstown P		Flored Time (re	a) [] 18	
Selected Tag			5.0	μι	Tag count o Inventory h		stapsed time(se		SI (SR) GIFF
Mask	E28011700000020CE0CFC438		Tag Lis	st		6	Click	Flush	
Start Address(Word)	0	Set Selection	Index	PC	EPC	9	Glick	punt	
Tay aat	SESSION_SO V	Gat Salastion	1	3400	3670770033334444E0CFC457	-37.2		14	
Tan Ber		Get Delection	2	3400	E28011700000020CE0CFC438	-30.7		14	
Action	ACTION_ASLINVA_DSLINVB V		3	3400	E28022223333444455551111	-42.9		14	Total Singulation
Selection Enable	DISABLE ~	Set Get	5	3000	E2806894000040055A05AC61	-32.5		14	70
Write/Read/Kill Tag									Total Unique
Write Memory(Hex)		Urita							5
Start Address	0	HILE							Total Duration (ms)
Length	0	Read							7109
Password(Hex)	00000000	Kill							Singulation Rate (tags/sec)
Lock Tag									9.8
-									
	Kill Access EPC TID User								
Mask		Lock							
Action(pwd/perma)									



## 4.3. Read / Write / Lock / Kill

#### 4.3.1. Basics

Write Memory (Hex): Writing to the tag

#### Start Address:

0 indicates the operation is executed from the first word in the specified memory bank.

1 indicates the operation executed from the second word in the specified memory bank.

**Length:** indicates the length of the read data (unit: word, 0 indicates the entire length from the Start Address).

Password (Hex): Access password/ Kill password. The default value is 00000000.

#### 4.3.2. Reading Tag

Example: reading the data with the start address of 2 and the length of 2 in the EPC area.

#### **Operating steps:**

- 1. Select the tag to read (for details, see 4.2 Select a Tag to Operate).
- 2. Select the memory bank to be read: EPC.
- 3. Enter the Start Address: 2.
- 4. Enter the read Length: 2.
- 5. Enter the Access Password of the RFID tag.
- 6. Click the "Read" button.

 If reading succeeds, the text "READ\_TYPE\_C\_TAG\_DATA" is displayed in the notification area. The read Data will be displayed in the Data column of the corresponding RFID Tag in the Tag List of the Inventory Data page.



FIG. 4-3-2-1 Read tag data

Note: If the specified RFID tag is not read by P3xU,

"HANDLE\_ACQUISITION\_FAILURE" is displayed in the notification area.

#### 4.3.3. Writing to Tag

#### 4.3.3.1 Writing to Tag

Example: writing "1234" with the start address of 2 to the EPC area in a tag with an access password "Password."

#### Operating steps:

- Select the tag to write to. (For details, see 4.2 Select a Tag to Read / Write / Lock / Kill)
- 2. Select the memory bank to write to: EPC
- 3. Enter the data to write to in the "Write Memory" text box (the number of characters must be a multiple of 4): 1234
- 4. Enter the Start Address: 2
- Enter the Access Password of the RFID tag.
   If the selected memory bank (such as the EPC area) is not locked, enter the default password (0000000)
- 6. Click the "Write" button.

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7. When the writing succeeds, "READ\_TYPE\_C\_TAG\_DATA" is displayed in the notification area and the data of the tag is displayed in the Data column of the corresponding RFID Tag in the Tag List of the Inventory Data page.



FIG. 4-3-3-1-1 Writing data to a tag

#### 4.3.3.2 Changing the Access Password

#### Example: Changing the Access Password of the RFID tag to "12345678".

#### **Operating steps:**

- 1. Select the tag to change the password (For details, see 4.2 Select a Tag to Read / Write / Lock / Kill)
- 2. Select a memory bank: RESERVED
- 3. Enter the Access Password "12345678" in the "Write Memory" text box
- 4. Enter the Start Address: 2.
- Enter the Access Password of the RFID tag
   When the RESERVED bank is not locked, enter the default password (0000000)
- 6. Click the "Write" button.
- 7. When the writing succeeds, "WRITE\_TYPE\_C\_TAG\_DATA" is displayed in the notification area.

<u>AsReade</u>	SR-P	3xU Demo	App f	or Windows Use	r's Ma	nual		
Select	O USER	Display	entory Data Start	Tag Count 0 Inventory	Round 0	Elapsed Time(sec) [	0 RSSI	(OR/OFF)
Mask E28022223333	3444455551111	Tar	r List		A]]	Tag Count: 5	Flush	
Start Address(Word)	Set S	Selection In	dex PC	EPC	RSSI	Data Co	ount	1
T . SESSION SO		1	3400	E28022223333444455551111	-40.2	1		
Target	Uet 2	Selection 2	3400	111111700000020CE0CFC438	-25.9	1		
Action ACTION		<b>~</b> –	3400	3670770033334444E0CFC457	-27.4	1		Total Singulation
Selection Enable DISABLE	(3) Enter (	(4) Enter	3400	E28011700000020CE0CE9C28	-70.6	1		5
Hu (14 / 01 - 1 / 02/11) Hu -								Total Unique
Write/Read/Kill Tag								5
Write Memory(Hex) 12345678		Write 💊						
Start Address 2								Total Duration (ms)
Length		Read	Ø	Click				437
Record (Yes) 0000000		Kill	U	CIICK				Cincelation Pate (terration)
Fassword(nex)								Singulation hate (tags/sec)
Lock Tag		~						11.4
		(5) Ente	er					
Kill Acces	is EPC IID User							
		Lock						-
Action(pwd/perma)								
								1

FIG. 4-3-3-2-1 Changing Access Password

#### 4.3.3.3 Changing the Kill Password

The operating steps are the same as 4.3.3.2 How to Change the Access Password. Difference: The Start Address in step 4 is 0.

#### 4.3.4. Lock Tag

Lock, unlock, or permanently lock the selected memory bank.

#### Example: Locking the EPC area of the RFID tag

#### Operating steps:

- Select the tag to lock (For details, see 4.2 Select a Tag to Read / Write / Lock / Kill)
- Enter the Access Password. The Access Password cannot be 00000000.
   To change it, see 4.3.3.2 Changing the Access Password.
- 3. Select the memory bank to lock: EPC.
- 4. Select the Action: pwd (see the figure below)
- 5. Click the "Lock" button.
- 6. When the lock operation succeeds, "LOCK\_TYPE\_C\_TAG" is displayed in the notification area.

Basic Operation Tag	HID Setting		entor	y Data					
RESERVED O EPO	C 🔿 TID 🔿 USER		Che		Ter Curre 0	. n	<b>v</b> ]	()	
Selected Tag			518	irι	Tag Count 0 Inventory	nound 0	Liapsed lime	(Sec)	RSSI (OR/OFF)
Mask	E28022223333444455551111		Tag Lis	it		All	Tag Count: 5	Flus	h
Start Address(Word)	0	Set Selection	Index	PC	EPC	RSSI	Data	Count	
		a . a 3!	1	3400	11111170000020CE0CFC438	-27.1		1	
Target	555108_30	Get Selection	2	3400	3670770033334444E0CFC457	-27.0		1	
Action	ACTION_ASLINVA_DSLINVB ~		3	3000	12346894000040055A05AC61	-25.6		1	Total Singulation
			4	3000	3035A754BC4465C000000008	-51.2		1	5
Selection Enable	DISABLE ~	Set Get	5	3400	E28022223333444455551111	-44.8		1	5
Write/Read/Kill Tag									Total Unique
Write Memory(Hex)		Inda.							5
Start Address	0	Read							Total Duration (ms)
Length	0								437
Password(Hex)	12345678	Kill							Singulation Rate (tags/sec)
Lock Tag			Enter						11. 4
	Kill Access EPC TID User								
Mask									
Action(pwd/perma)		Lock		1	5 Click				
③ Selec	t	④ Select				1	1	1	

FIG. 4-3-4-1 Lock

For other operations (such as Unlock and Permanently Lock), the operation steps are the same as Lock. Select the Action as shown in the following figures:

Unlock

.

Lock Tag		
	Kill Access EPC TID User	
Mask		Lock
Action(pwd/perma)		

FIG. 4-3-4-2 Unlock

Permanently Lock:

Lock Tag		
Mask Action(pwd/perma)	Kill       Access       EPC       TID       User         I       I       I       I       I       I       I         I       I       I       I       I       I       I       I         I       I       I       I       I       I       I       I       I         I       I       I       I       I       I       I       I       I	Lock

FIG. 4-3-4-3 Lock permanently

#### Note:

- When the Kill Password or Access Password of the RFID tag is locked, the default password "00000000" cannot be used to write or read the memory bank; If any other memory bank is locked, data cannot be written to the memory bank but can be read using the default password "00000000".
- 2) When the RESERVED bank of the tag is permanently locked, it cannot be written to or unlocked.

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#### 4.3.5. Killing Tag

#### **Operating steps:**

- Select the tag to kill. (For details, see 4.2 Select a Tag to Read / Write / Lock / Kill)
- 2. Enter the Kill Password. The password cannot be 00000000. For changing the Kill Password, see 4.3.3.3 How to Change the Kill Password.
- 3. Click the "Kill" button.

Basic Operation Tag	HID Setting		to	y Data					
RESERVED O EPO	C OTID OVSER		y j			- 10			
Selected Tag			sta	irt	Tag Count U Inventory	Kound U	Elapsed Time	sec) 0 1	SSI(OR/OFF) ON OFF
Mask	E28022223333444455551111		Tag Li	it		All	Tag Count: 5	Flush	<b>k</b>
Start Address(Word)	0	Set Selection	Index	PC	EPC	RSSI	Data	Count	
Towart	SESSION SO	Gat Salastian	1	3400	1111111700000020CE0CFC438	-27.1		1	
Targer		Ger Serection	2	3400	3670770033334444E0CFC457	-27.0		1	
Action	ACTION_ASLINVA_DSLINVB ~		3	3000	12346894000040055A05AC61	-25.6		1	Total Singulation
			4	3000	3035A754BC4465C00000008	-61.2		1	- 5
Selection Enable	DISABLE	Set Get	5	3400	E28022223333444455551111	-44.8		1	
Write/Read/Kill Tag-									Total Unique
Write Memory(Hex)		Warita.							5
Start Address	0	Brite		$\sim$					Total Duration (ms)
Length	0	Read		(3)	Click				437
Password(Hex)	12345678	Kill		_					Singulation Rate (tags/sec)
Lock Tag		2 E	Inter						11. 4
	Kill Access EPC TID User								
Mask		Look							
Action (nwd/norma)		LOOK							
Accompwd/perma)									

FIG. 4-3-5-1 Killing an RFID tag



This section is focused on configuring the settings in HID mode. All the parameters on this page are saved to P3xU.

The settings include the configuration of parameters such as mask, inventory interval, data output suffix, etc. The "Set" button is to set the parameters of the P3xU in HID mode. The "Get" button is used to get the current parameters of the P3xU in HID mode.

#### HID (Human Interface Device) mode:

When the P3xU is connected to a mobile device (or a PC) in HID mode, it is recognized as a keyboard and the data read by it is sent to the mobile device (or the PC) and displayed as a text input tool. There is no need to use an app with a dedicated SDK. HID mode supports Android and Windows devices.

#### How to read RFID tags in HID mode:

Power on the P3xU and place RFID tags at a close distance to the antenna. Press the SCAN Button and the data of RFID tags will be entered at the cursor location on the screen of the Android device or the Windows device with the P3xU's blue LED light flashing. Press the SCAN Button again to stop reading.

#### Switching to HID mode:

1. Switch both DIP Switches of P3xU to the OFF position.



#### FIG. 5-1 DIP switches

 Connect the POWER/PC port of the P3xU and a Windows device using a USB-C cable. When the connection is successful, the LED will light up and it will beep twice.

## 5.1.Mask

With this setting, the data of RFID tags with a specified memory bank, start address, and length can be output to the connected device.

#### Example: Set to output data with EPC area whose length is 2.

#### **Operating steps:**

- 1. Select a memory bank: EPC
- 2. Enter the Start Address: 1
- 3. Enter the Read Length: 2
- 4. Click the "Set" button to finish setting

	) User	
StartAddress(Word)	1	② Ente
Read Length(Word)	2	③ Ente
Repeat data filter time	0*1s ~	
Inventory interval	0*0.1s 🗸	
🗹 Output with Enter	Output with Tab	
Output with Space	Output with Comma	

FIG. 5-1-1 HID Mask settings

Switch the P3xU to HID mode and connect to an Android/Windows device. Next, open an app that supports text input, such as Notepad. Then, press the SCAN Button of the P3xU to inventory RFID tags and the data is entered as in the figure below:

30347A12 36707700 30347A12 E2802222 36707700 30347A12

#### FIG. 5-1-1-2 HID mode output data

Note:

- 1) If EPC is selected for the memory bank and the Start Address is 0, the data in the PC area is output. If the Start Address is 1, the data in the EPC area is output.
- 2) When EPC is selected as the memory bank and the Start Address and the Read Length are set to 0, the PC and EPC data are output.
- 3) When TID or USER is selected for the memory bank and the Start Address and the Read Length are set to 0, no data is output.

## 5.2. Output without Repeat EPC or Output without Repeat TID

Output without repeat EPC and Output without repeat TID cannot be selected at the same time.

If one of them is selected, the data of the RFID tags with repeated EPC or TID within the reading range of the antenna is output only once and is not repeatedly output. When neither of them is selected, the RFID tag data within the reading range of the antenna will be repeatedly output.

#### Example: Selecting Output without repeat EPC

#### **Operating steps:**

- 1. Click "Output without repeat EPC" to select
- 2. Click the "Set" button to complete the setting.

● EPC ○ TID (	) User
StartAddress(Word)	1
Read Length(Word)	2
Repeat data filter time	
● EPC ○ TID	0*1s 🗸
Inventory interval	0*0.1s
☑ Output with Enter	Output with Tab
Contact with Same	Output with Commo

FIG. 5-2-1 Selecting output without Repeat EPC/TID

**Note:** Output without repeat EPC and Output without repeat TID cannot be selected when both Start Address and Read Length are 0.

## 5.3. Repeat data filter time

Set the interval between repeated outputs of the same RFID tag data. The range is 0\*1s to 99\*1s. When the Repeat data filter time is set to 10\*1s and there is only one RFID tag within the reading range of the antenna, the data of the tag can only be output again after 10 seconds from each time it is output.

#### Example: Setting to output the same EPC tag data every 1 second

#### Operating steps:

- 1. Confirm that Output without repeat EPC and Output without repeat TID are both unchecked.
- 2. Select "EPC"
- 3. Select "1\*1s" from the drop-down list
- 4. Click the "Set" button to complete the setting.

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Basic Operation Tag HID Set	ting Other Setting	① Uncheck
HID work parameter		
● EPC ○ TID (	User Output wit	hout repeat EPC hout repeat TID
StartAddress(Word)	1	
Read Length(Word)	2	
Repeat data filter time		② Select
● EPC ○ TID	1*1s	~
Inventory interval	0*0.1s	~
✓ Output with Enter ☐ Output with Space	Output with Tab Output with Comr	na
③ Click	Set	Get

FIG. 5-3-1 Setting Repeat data filter time

#### Note:

- When one of Output without repeat EPC and Output without repeat TID is selected, Repeat data filter time cannot be selected. Repeat data filter time takes effect only when neither Output without repeat EPC nor Output without repeat TID is selected.
- 2) When Start Address and Read Length are both 0, Repeat data filter time is fixed to 0\*1s.
- 3) When both Start Address and Read Length are not 0, Repeat data filter time can be selected.

## **5.4.Inventory interval**

Set the interval between taking inventories. The range is 0\*0.1s to 10\*0.1s.

#### **Operating steps:**

- 1. Select the interval time from the drop-down list.
- 2. Click the "Set" button to complete the setting.

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Basic Operation Tag HID Se HID work parameter	O User	Setting	out repeat EPC out repeat TID	
StartAddress(Word)	0	100 100		
Read Length(Word)	0			
Repeat data filter time				
● EPC ○ TID	0*1s		~	① Select
Inventory interval	1*0.1s		~-	
✓ Output with Enter ☐ Output with Space		Output with Tab Output with Comma	3	
② Click		Set	Get	

FIG. 5-4-1 Inventory interval

**Note:** Inventory Interval can be selected only when EPC is selected as the memory bank and both Start Address and Read Length are set to 0. Otherwise, Inventory Interval cannot be selected and defaults to 0\*0.1s.

## 5.5.Output suffix

Set the suffix of the output data.

The suffix can be selected from Enter (default), Tab, Space, Comma, and None (not selecting). Only one of the options can be selected.

#### Operating steps:

- 1. Select the output suffix
- 2. Click the "Set" button to complete the setting

● EPC ○ TID (	) User	Output without repeat EPC Output without repeat TID
StartAddress(Word)	0	
Read Length(Word)	0	
Repeat data filter time		
● EPC ○ TID	0*1s	~
nventory interval	1*0.1s	× _
Output with Enter		1 Sele
Output with Space		Output with Comma

FIG. 5-5-1 Setting output suffix

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This section is focused on setting automatic inventories of RFID tags during the selected periods of time and the path for saving the tag data. The set parameters are saved to the app.

Choose	Path C	:¥Users¥bsets¥	Desktop¥RF D	ata Files1	
				Set	Get
Auto Invent	ory			2023/02	2/09 11:24:52
ON/OF	FON	~		Set	Get
$\checkmark$	Weekday			Veekend	
$\checkmark$	Mon 🔽 Tue	s 🔽 Wed 🔽 .	Thurs 🔽 Fri	Sat S	Sun

FIG. 6-1 Other Setting

## 6.1. Export Path

Set the path for automatic saving of RFID tag data during the inventory. The field is empty by default, and you can select the data saving path by clicking the "Choose Path" button as shown in the figure below. You can also enter it manually.

Choose Path	C:¥Users¥bsets¥Desktop¥RF Data Files1					
		Set	Get			

FIG. 6-1-1 Setting Export Path

When the Export Path is set, the data of read tags during inventory (including manual inventory and scheduled inventory) is automatically saved to this path each time the P3xU

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stops inventorying. The data of tags read during the inventory is not saved automatically when Export Path is not selected. The exported data files are named after the start and end time of the inventories (24-hour format, accurate to milliseconds) and the file format is .csv.

#### For example:

20230209141000896\_20230209142000327.csv

## **6.2. Scheduled Inventory**

Set the parameters for scheduled auto-inventory of RFID tags. The auto-inventories are executed on a weekly basis. Once this is set to on, even when the app runs in the background, the scheduled inventories are executed at the scheduled times.

		2020/02	/09/11:24:0.
ON ~	[	Set	Get
kday		Weekend	
🔽 Tues 🔽 Wed 🔽 Thu	urs 🗹 Fri 🛛	Sat 🔽 S	iun
	ON ✓ kday ☑ Tues ☑ Wed ☑ Thu	ON ~ kday / Monton Tues / Wed / Thurs / Fri	ON     Set       kday     Weekend       Tues     Wed       Thurs     Fri

FIG. 6-2-1. Scheduled Inventory

- · ON/OFF: Select to ON/OFF scheduled auto-inventory in the drop-down list.
- Start Time: The start time of the inventory. Format: HH: MM
- Stop Time: The end time of the inventory. Format: HH: MM

#### **Operating steps of scheduled auto-inventory:**

- 1. Select the days of the week to execute auto-inventories. Multiple selections are available.
- 2. Set the start and end times for inventory. The end time cannot be earlier than the start time.
- 3. Click the "Set" button to complete the settings. After the settings are completed, click the "Get" button to confirm that the parameters are set successfully.
- 4. Select ON in the ON/OFF drop-down list to set this function to ON (selecting OFF does not delete the set parameters).

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Note:

- 1) In order to execute scheduled tasks, the app needs to be running and successfully connected to the P3xU.
- 2) Automatic inventory can only be executed once a day, and this time period cannot be set overnight.
- 3) When the app is started during the automatic inventory period, the inventory starts automatically as soon as the app is started.
- 4) Example 1.

The scheduled automatic inventory time is 15:00~16:00 and the inventory is stopped by clicking the "Stop" button at 15:30.

In this situation, when the "Start" button is clicked again between 15:30 and 16:00, the inventory is automatically stopped without clicking the "Stop" button at the scheduled "Stop" of 16:00. If a data saving path is set, the two sets of data will be saved, with the end time being 15:30 and 16:00, respectively.

5) Example 2.

The scheduled automatic inventory period is 15:00~16:00 and the "Start" button is clicked at 14:30 to start the inventory. In this case, the scheduled "Stop" won't happen until 16:00. If a data saving path is set, the one set of data will be saved, with the start and end times being 14:30 and 16:00, respectively.

# Firmware Update

## 7.1.P3xU Firmware Update

This function is used to update the P3xU firmware. This function requires a WAN connection to the Internet.

#### **Operating steps:**

1. Click the "Get Files" button to get a list of firmware files that can be updated.

Firmware Update										
FW Version	1.0.21	Get Ver	HW Version		CIICK	Ver	RFID FW Version	RED4S_	v2.2.1_J	Get Ver
FW Files		~	Get Files	Update	RFID FW F	iles 🗌		~	Get Files	Update

#### FIG. 7-1-1 Getting Files

- 2. The firmware update files are displayed in the FW Files drop-down list. Select the firmware update file to use from the drop-down list.
- 3. Click the "Update" button.

Firmware Upo	late	2	) Selec	t		3	Click				
FW Version	1.0.21	$\Box$	et Ver	HW Version	1.0.2	$\checkmark$	Get Ver	RFID FW Version	RED4S_v	/2.2.1_J	Get Ver
FW Files	P3×U_V1.0.21	І_V2Ьі	n ~	Get Files	Updat	te	RFID FW Files		~	Get Files	Update

#### FIG. 7-1-2 FW Files

4. Click the "Yes" button to start updating the firmware. The Notification area displays the update progress.

Update Firmware	×		
Do you want to update now?			
Yes <u>N</u> o			
-			

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Get Ver Update	2023/10/11 10:23:12 Transfer file succeeded. 2023/10/11 10:23:13 Transfer file succeeded. 2023/10/11 10:23:13 Transfer file succeeded. 2023/10/11 10:23:13 Transfer file succeeded.	^
Firmware Upd	lating	

FIG. 7-1-3 Firmware Updating

After the update is complete, the message below is displayed on the screen.
 Click the "Yes" button to restart the P3xU if you want to use the updated firmware.
 Otherwise, the firmware remains as the one before the update until it is rebooted.



FIG. 7-1-4 Update Complete

6. The LED indicator and two beep sounds indicate a successful restart. Click the "OK" button to disconnect.





7. Click the "Connect" button to reconnect. Once connected, the firmware version will be automatically downloaded. (You can also click the "Get Ver" button to get the firmware version.)

VCP	() Click
COM Port COM6 V Search Baud Rate 115200bps Connect	)isconnect
_	

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ASRecider. ASR-P3xU Demo App for Windows User's Manual

COM Port	COM6 V Se	arch Baud Rate 115200bps	Connect Disconnect
-Firmware Up	date		DETD EW1/series DED/S v221 L
FW Files	Get	Get Files Update RFID FW Files	Get Files Update

FIG. 7-1-6 Reconnecting

## 7.2. RFID Module Firmware Update

This function is used to update the firmware of the RFID module of the P3xU. This function requires a WAN connection to the Internet.

#### **Operating steps:**

1. Click the "Get Files" button to get the list of RFID module firmware files that can be updated to.

Firmware Update							① Click
FW Version 1.0.21	Get Ver HW Version	1.0.2	Get Ver	RFID FW Version	RED4S_v:	2.2.1_J	
FW Files	✓ Get Files	Update	RFID FW Files		~	Get Files	Update

FIG. 7-2-1 Get Files

- 2. The firmware update files will be displayed in the "RFID FW Files" drop-down list. Select the firmware update file to use from the drop-down list.
- 3. Click the "Update" button.

Firmware Update	② Select	③ Click
FW Version 1.0.21 Get Ver HW Version 1.0.2 Get Ver	RFID FW Ve h RED4S_v2.2.1_J	G. /er
FW Files Get Files Update RFID FW Files R	ED4S_v2.2.1_Jhex ED4S_v2.2.1_Jhex ED4S_v2.2.0_Jhex	les Update

FIG. 7-2-2 FW Files

4. Click the "Yes" button to start updating the firmware. The Notification area displays the update progress.



FIG. 7-2-3 Firmware Updating

5. After the update is complete, the message below is displayed on the screen.



#### FIG. 7-2-4 Update Complete

6. Disconnect the device from the PC physically and then reconnect it. The LED indicator and two beep sounds indicate a successful restart. Click the "Connect" button to reconnect. Once connected, the firmware version of the RFID module is automatically downloaded. (You can also click the "Get Ver" button to get the firmware version.)

108	⑥ Click
COM Port COM6 V Search Baud Rate 115200bps Connect	Disconnect

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**AsReader** 

COM Port	COM6 V Search Baud Rate 1	15200bps Connect	Disconnect
Firmware Up			
FW Version	Get Ver Hw Version 1.0.2	ate RFID FW Files	Get Files Update

FIG. 7-2-5 Reconnecting

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## ASR-P3xU C# Demo

Sep. 2023 1<sup>st</sup> Edition

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