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1.General Programming Setting

1.1 Output Setting Code

Setting Code (Such as "WFFD980") could be output. Scan" Output Setting Code",setting code will be output after reading success. Setting code will be scanned as normal barcode after using this function, it can not be used to set for the scanner. If restart the scanner,scanner will be returned to factory default setting,"Output Setting Code" will be used as setting code.

Output Setting Code

Return to Factory Default

1.2 Default Setting

Notice: Please use "Return to Factory Default" carefully, scanner will lose all the parameters setting after reading this code, all the data will be returned to factory default setting. Factory default setting and functions details see appendix A.

1.3 Commnunication

1.3.1 Serial Communication

This scanner support TTL□232 and USB interface to communicate with PC. Scanner can receive the reading code,control the instruction and change the parameters of the scanner through the communication. Default serial parameters setting is as below table.

Parameter	Defaulted	Parameter	Defaulted
Serial Mode	TTL-232	Data Bit	8
Baud Rate	9600	Stop Bit	1
Check	None	Hardware Fluid Control	None

1.3.1.1 Baud Rate

Baud Rate's unitisbps(bitspersecond，optional parameters as below;

9600 1200 19200 2400 38400

4800

57600

14400

115200

1.3.2 USB Interface

When Scanner use USB connected with PC, defaulted mode is USB DATAPIPE。

1.3.2.1 USB DATAPIPE

USB DATAPIPE is user□defined USB transmission communication。 This function needed to be installed the driver in the PC.

Change to USB DATATAPIPE Mode

1.3.2.2 USB HID□KBW

When use USB interface， scanner could be simulated to be HID□KBW 。 In this mode, scanner acted as a simulated keyboard to output data to PC.

Changed to be USB HID□KBW

1.3.2.3 Standard Keyboard Input Mode

Standard Keyboard Input Mode is defaulted setting. The scanner support another two modes; Emulation Input Characters Mode and Emulation Input Control Characters. User can choose the mode as needed.

Changed to be Standard Keyboard Input Mode

1.3.2.4 Emulation Input Characters Mode

In order to input any ASCII characters(16 hex) in any kind of languages, the wand emulation can be set as emulation input characters mode. Scan speed will be lower when choose this kind of mode. When changed to be emulation input characters mode, input the data corresponding ASCII character, the scanner will read the code with wand emulation as below;

（1）Keep pressing "ALT"

（2）Input the number keys in the digital keyboard in order according the character code.

（3）Release "ALT"

Changed to be Emulation Input Character Mode

Notice: In this mode, suppose to turn on the key Num Lock on the number mini keyboard

1.3.2.5 Emulation Input Control Characters

The 16 hex from 0x00~0x1F of ASCII values could be matched t some control function keys. In emulation keyboard, the control function keys input as the following:

(1) Keep pressing "Ctrl"

(2) Press the pointed control keys

(3) Release "Ctrl" and control keys

Changed to be Emulation Input Control Characters

1.3.2.6 Emulation Keyboard Input Control Characters Pairing Table

ASCII Value (HEX)	Function Key	ASCII Value (HEX)	Function Key
00	2	10	P
01	A	11	Q
02	B	12	R
03	C	13	S
04	D	14	T
05	E	15	U
06	F	16	V

1.3.2.7 Country/Language Keyboard Layout

Different kind of country language match different kind of keyboard layout. Defaulted keyboard layout is US keyboard.

1. US

2. Belgium

3. Brasil

4. Canada

07	G	17	W
08	H	18	X
09	I	19	Y
0A	J	1A	Z
0B	K	1B	[
0C	L	1C	\
0D	M	1D	]
0E	N	1E	6
0F	O	1F	.

5. Czechoslovakia

6. Denmark

7. Finland

8. France

9. Austria

10. Greece

11. Hungary

12. Israel

13. Italy

14. Latin America

15. Netherland

16. Norway

17. Poland

18. Portugal

19. Romania

20. Russia

21. Slovakia

22. Spain

23. Sweden

24. Switzerland

25. Tuekey 1

26. Turkey 2

27. English

28. Japan

1.3.2.8 Unknown Character Beep

Due to the difference in the keyboard format, the character of the bar code data can not be transmitted when not found matching keys in emulation keyboard mode. Through the following setting to decide if scanner will send the wrong beep in the generation of this error. When scan Beep Off, there will not be an error message. When scan Beep On, there will be an error message show when there is mistake from the bar code.

**Beep On

Beep Off

1.3.2.9 Time-delay Between Characters

The interval between the scans in continuous scan of emulation keyboard.

No Delay

Delay 5ms

Delay 10ms

Delay 15ms

1.3.2.10 Caps Lock

When Caps Lock on, scanner will change the letters of barcode as the keyboard of PC caps lock on. The conversion will not be influenced by the caps lock state of PC keyboard.

** Caps Lock Off

Caps Lock On

Notice: This function is invalid in Emulation Input Control Characters and Emulation Input Control Characters.

For example: when scan Caps Lock On, barcode is "AbC", output in PC is "aBc".

1.3.2.11 Enforce Letters Converse

This function supports to enforce the letters case state in emulation keyboard. When scan "All Upper-case Letter", all the letters of the barcode will be output as upper-case letters. When scan "All Lower-case Letter", all the letters of the barcode will be output as lower-case letters.

**No Conversion

All Lower-case Letters

All Upper-case letters

For example: when scan "All Lower-case Letters", barcode "AbC" will be output as "abc".

1.3.2.12 Emulation Number Mini Keyboard

When this function is off, all the output data is as big keyboard corresponding keys.

When this function is on, if the scanner decoded number is from "0~9", the output data is

as emulation number mini keyboard corresponding keys. If the scanner decoded number is excluded from “0~9”, and including the characters of “+”“_”“*”“/”“.”, the output data is as big keyboard corresponding keys. When Num Lock is turned off, all output data is as big keyboard corresponding keys. when Num Lock is turned on, all output data is as number mini keyboard corresponding keys.

Emulation

None Emulation

Notice: Please make sure Num Lock of PC is on when use this function. If scan “Emulation”, this function is invalid.

1.3.2.13 USB COM Port Emulation

When use USB communication, but the host application use serial communication to receive data, scanner can be set as USB COM Port Emulation. This function needed to install the driver in PC.

Changed to be USB COM Port Emulation

1.3.2.14 HID-POS

HID-POS interface is used for new application software. It can transmit 56 characters in separate USB message with higher speed than emulation keyboard interface.

Feature:

☆HID interface no need install driver.

☆Transmission speed is higher with HID than with emulation keyboard interface and RS232.

Notice: HID-POS no need to install driver. But it requires to install driver when HID interface used in Win98 system. When scanner connects to Win98 at the first time, system will require to install driver. All HID interface use standard driver provide by the operation system.

Changed to HID-POS

2. Reading Mode

2.1 Manual

Default setting is manual mode.

Manual

2.2 Continuous Mode

Continuous Mode

2.2.1 Single Reading Time

In continuous mode, the parameter means the maximum time for the scanner ongoing acquisition the barcode before decoding.

Change Single Reading Time

2.2.2 Reading Interval

Change Reading Interval

2.3 Sensor Reading Mode

Sensor Reading Mode

2.3 Sensor Reading Mode

After auto sense mode is set, no need trigger, reading engine immediately starts to detect ambient brightness. Once the scene is changed, engine starts to read codes after setting image stabilization time is over. After reading successful output information or single reading timed out, reading engine requires to interval some time(configurable) to re-entering the monitor mode. Without following case, reading engine is cycle operation as the above: If the barcode is not scanned within a single reading time, reading engine will automatically pause reading and enters the monitoring mode.

Sensor Reading Mode

2.3.1 Single Reading Time

Under the auto sense mode, this Single Reading Time means allowing the engine to continue to identify the maximum length before reading success. Successful reading or single reading timed out, engine will enter into no reading intervals. Single reading time setting range is 0.1 – 25.5 seconds, unit is 0.1 seconds. When set as 0, the reading time is infinite. Default length 5.0 seconds. Settings refer to Appendix D.

Modify Single Reading Time

2.3.3 Image Stable Time

It means the scanner need to wait for the time of the image stabilization before decoding in sensor reading mode. Image stable time is 0~25.5 second, step is 0.1 second. Defaulted stable time is 0.4 second. Setting way details see appendix D.

Change Image Stable Time

2.3.4 Sensitivity

High Sensitivity

Medium Sensitivity

Low Sensitivity

Custom Sensitivity

In sensor reading mode, sensitivity class divided from 0-255, the lower number, the higher sensitivity class. Details please see appendix D.

2.4 Command Trigger Reading Mode

Command Trigger Reading Mode

3 LED Light and Aim

3.1 LED Light

LED light can provide auxiliary lighting for the decoding code and weak environment illumination to improve the reading ability. User can choose the one of the following state according to the application environment:

Normal(Defaulted): LED light will be on with decoding, and off without decoding.

LED On: LED is on lighting when scanner is on. LED Off: LED is no lighting in any instance.

Normal

LED Off

LED On

3.2 AIM

The aiming beam can help user to find the best reading distance. User can choose one of the following state according to the application environment. Normal(defaulted): scanner will show the aiming beam when decoding.

Aim On: when scanner is power on, aiming beam will be on continuously.

Aim Off: Aiming beam will be off in any instance

Normal

Aim Off

Aim On

4. Output Beep Character

4.1 All Beep

Scan “Beep Off” to close all the beep. Scan “Beep On” to cancel the mute setting.

Beep Off

Beep On

4.2 Good Read Beep

Scan “Good Read Beep Off” can stop the beep for successful reading; scan “Good Read Beep On” can recover the beep for successful reading.

**Good Read Beep On

Good Read Beep Off

4.2.1 Beep Frequency

Low Frequency

**Medium Frequency

High Frequency

4.2.2 Beep Duration

40ms

**80ms

120ms

4.3 Good Read LED Indicator

**Good Read LED Indicator On

Good Read LED Indicator Off

4.4 Decoding State Prompt

In order to know from PC if decoding is success'scanner can open this function. Scan "Decoding State Prompt On", scanner will transmit "F" before barcode when decoding is not success; and will transmit "S" before barcode when decoding is success.

Notice: This function is invalid in USB DATAPIPE mode.

Decoding State Prompt On

**Decoding State Prompt Off

5. Data Format

Decoding data should be divided in most of applications.

Data could be divided as AIM ID and Code ID, some will use end character in some special circumstance.

After setting, scanner will output the data as below: [“F”/“S”] + [Code ID] + [AIM ID] + [DATA] + [End character]

Within these format, [DATA] is necessary for output, others are optional.

5.1 AIM ID

AIM is Automatic Identification Manufacturers, AIM ID define the identification code for all the standard barcode, details see appendix B. Scanner can add this code before the barcode, this code is AIM ID.

Allow Adding AIM ID Prefix

**Prohibit Adding AIM ID Prefix

5.2 CODE ID Prefix

Except for AIM ID, user can use CODE ID prefix to identify the code type. Details please see appendix C.

Allow Adding CODE ID Prefix

**Prohibit Adding CODE ID Prefix

There are two types of CODE ID output: original CODE ID and visual CODE ID. Details please see appendix C.

**Original (CODE ID)

Visual CODE ID

5.3 End Suffix

End suffix means end of data information. Optional ending character suffix have CR (Enter), CRLF(Enter and newline),TAB (Horizontal Tab).

**Prohibit Adding End Suffix

Adding End Suffix CR

Adding End Suffix CRLF

Adding End Suffix TAB

6 Code Parameters Setting

6.1 Control All Code Types

6.1.1 Control All the Code Types

Allow Enable All Code Types

Prohibit Enable All Code Types

6.1.2 Control All 1D Code Types

Allow Enable All 1D Codes

Prohibit Enable All 1D Codes

6.1.3 Control All 2D Code Types

Allow Enable All 2D Codes

Prohibit Enable All 2D Codes

6.1.4 Normal and Inverse Data

Normal video / standard video means light color background with deep color bar code. Inverse video means deep color background with light color bar code.

Normal Data 

Inverse Data 

Allow Enable Inverse Data

**Prohibit Enable Inverse Data

6.2 1D Code Types

6.2.1 Code 128

6.2.1.1 Return to Factory Default Setting

Code 128 Default Setting

恢复 Code 128默认设置

6.2.1.2 Enable/Disable Code 128

**Enable Code 128

Disable Code 128

6.2.1.3 UCC/EAN128 (GS1 128)

Return to Factory Default Setting

UCC/EAN 128 Default setting

Enable /Disable UCC/EAN-128

**Enable UCC/EAN128

Disable UCC/EAN-128

6.2.1.4 AIM 128

Return to Factory Default Setting

Return AIM 128 Default Setting

Enable / Disable AIM128

**Enable AIM128

Disable AIM 128

6.2.2.2 Enable/Disable EAN-8

**Enable EAN-8

Disable EAN-8

6.2.2.3 Output Check Digit

**Output Check Digit On

Output Check Digit Off

6.2.2.4 Expanded Code

Expanded Code means adding more 2 or 5 digits after the normal bar code. For example as below, the left side is the normal bar code, the right side is the expanded code.

Enable 2 Digit

**Disable 2 Digit

Enable 5 Digit

**Disable 5 Digit

6.2.2.5 Expanded Code Necessary

Expanded Code Necessary

**Not Necessary

6.2.2.6 Expanded to be EAN-13

Expanded to be EAN-13 means to add“0 0000”before code EAN-8 then transmit.

Expanded to be EAN-13

**No Expanded

6.2.3 EAN13

6.2.3.1 Return to Factory Default Setting

Return EAN-13 Default Setting

6.2.3.2 Enable / Disable EAN-13

**Enable EAN-13

Disable EAN-13

6.2.3.3 Output Check Digit

EAN-13 standard code data is 13 bytes, the last byte is check digit used to check the correctness of data.

**Output Check Digit On

Output Check Digit Off

6.2.3.4 Expanded Code

Expanded Code means adding more 2 or 5 digits after the normal bar code. For example as below,

the left side is the normal bar code, the right side is the expanded code.

Enable 2 Digit

**Disable 2 Digit

Enable 5 Digit

**Disable 5 Digit

6.2.3.5 Expanded Code Necessary

Expanded Code Necessary

**Not Necessary

6.2.3.6 ISSN

Return to Factory Default Setting

Return ISSN Default Setting

Enable / Disable ISSN

Enable ISSN

**Disable ISSN

6.2.3.7 ISBN

Return to Factory Default Setting

Return ISBN Default Setting

Enable / Disable ISBN

**Enable ISBN

Disable ISBN

Choose Format

**13 Digit

10 Digit

6.2.4 UPCE

6.2.4.1 **Return to Factory Default Setting**

Return UPC-E Default Setting

6.2.4.2 Enable / Disable UPC-E

** Enable UPC-E

Disable UPC-E

6.2.4.3 Output Check Digit

UPC-E standard code data is 8 bytes, the last byte is check digit used to check the correctness of data.

**Output Check Digit On

Output Check Digit Off

6.2.4.4 Expanded Code

Expanded Code means adding more 2 or 5 digits after the normal bar code. For example as below, the left side is the normal bar code, the right side is the expanded code.

Enable 2 Digit

**Disable 2 Digit

Enable 5 Digit

**Disable 5 Digit

6.2.4.5 Expanded Code Necessary

Expanded Code Necessary

**Not Necessary

6.2.4.6 **Transmit System Character**

The first byte of UPC-E is system character, its fixed value is “0”.

Transmit System Character “0”

**No Transmit “0”

6.2.4.7 Expanded to be UPC-A

xpanded to be UPC-A

**No Expand

6.2.5 UPCA

6.2.5.1 Return to Factory Default Setting

Return UPC-A Default Setting

6.2.5.2 Enable/Disable UPC-A

**Enable UPC-A

Disable UPC-A

6.2.5.3 Output Check Digit

UPC-A standard code data is 13 bytes, the last byte is check digit used to check the correctness of data.

**Output Check Digit On

Output Check Digit Off

6.2.5.4 Expanded Code

Expanded Code means adding more 2 or 5 digits after the normal bar code. For example as below, the left side is the normal bar code, the right side is the expanded code.

Enable 2 Digit

**Disable 2 Digit

Enable 5 Digit

**Disable 5 Digit

6.2.5.5 Expanded Code Necessary

6.2.5.6 **Transmit Leading Character**

Necessary

**No Necessary

Transmit “0”

**No Transmit“ 0 ”

Notice: leading character of UPC-A will not be showed with the bar code, the first byte of the printed bar code will probable not be “0”.

6.2.6 Interleaved 2 of 5

Interleaved 2 of 5 Default Setting

6.2.6.1 **Return to Factory Default Setting**

6.2.6.2 Enable / Disable Interleaved 2 of 5

**Enable Interleaved 2 of 5

Disable Interleaved 2 of 5

6.2.6.3 **Check and Output Check Digit**

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.6.4 Output Leading Character “0”

**Output Leading Character “0”

No Output Leading Character “0”

6.2.6.5 ITF-6

ITF-6 Default Setting

**Disable ITF-6

nable ITF-6 No Output Check Digit

Enable ITF-6 Output Check Digit

6.2.6.6 ITF-14

ITF-14 Default Setting

Disable ITF-14

Enable ITF-14 No Output Check Digit

Enable ITF-14 Output Check Digit

6.2.6.7 Matrix 2 of 5

Return to Factory Default Setting

Matrix 2 of 5 Default Setting

Enable/Disable Matrix 2 of 5

**Enable Matrix 2 of 5

Disable Matrix 2 of 5

6.2.6.8 Check and Output Check Digit

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.7 Industrial 25

6.2.7 Industrial 25

6.2.7.1 Return to Factory Default Setting

Industrial 25 Default Setting

6.2.7.2 Enable/Disable Industrial 25

**Enable Industrial 25

Disable Industrial 25

6.2.7.3 Check and Output Check Digit

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.8 Standard 25

Standard 25 Default Setting

6.2.8.1 **Return to Factory Default Setting**

6.2.8.2 Enable/Disable Standard 25

**Enable Standard 25

Disable Standard 25

6.2.8.3 Check and Output Check Digit

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.9.1 Return to Factory Default Setting

Code 39 Default Setting

6.2.9.2 Enable/Disable Code 39

6.2.9.2 Enable/Disable Code 39

**Enable Code 39

Disable Code 39

6.2.9.3 Output Start and End Character

Output Start and End Character

**No Output Start and End Character

6.2.9.4 Check and Output Check Digit

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.9.5 Support Full ASCII

Enable Full ASCII

**Disable Full ASCII

6.2.10 Codabar

6.2.10.1 **Return to Factory Default Setting**

Codabar Default Setting

6.2.10.2 Enable/Disable Codabar

**Enable Codabar

Disable Codabar

6.2.10.3 Check and Output Check Digit

**No Check

Check But No Output Check Digit

Check and Output Check Digit

6.2.10.4 **Output Start and End Character**

**Output Start and End Character

No Output Start and End Character

6.2.10.5 Check and Output Check Digit

**ABCD/ABCD

ABCD/TN*E

abcd/abcd

abcd/tn*e

6.2.11 Code 93

6.2.11.1 Return to Factory Default Setting

Code 93 Default Setting

6.2.11.2 Enable/Disable Code 93

**Enable Code 93

Disable Code 93

6.2.11.3 Check and Output Check Digit

**No Check

**Check But No Output Check Digit

Check and Output Check Digit

6.2.12 Code 11

6.2.12.1 Return to Factory Default Setting

Code 11 Default Setting

6.2.12.2 Enable/Disable Code 11

**Enable Code 11

Disable Code 11

6.2.12.3 Check and Output Check Digit

No Check

**One Check, MOD11

Two Check MOD11/MOD11

Two Check MOD11/MOD9

MOD11 One Check(Len <= 11)

MOD11/MOD11 Double Check(Len > 11)

MOD11 One Check(Len <= 11)

MOD11/MOD9 Double Check(Len > 11)

**Output Check Digit

No Output Check Digit

6.2.13 Plessey

6.2.13.1 **Return to Factory Default Setting**

Plessey Default Setting

6.2.13.2 Enable/Dsiable Plessey

**Enable Plessey

Disable Plessey

6.2.13.3 Check and Output Check Digit

No Check

**Check But No Output Check Digit

Check and Output Check Digit

6.2.14 MSIPlessey

MSI-Plessey Default Setting

6.2.14.1 **Return to Factory Default Setting**

6.2.14.2 Enable/Disable MSI-Plessey

**Enable MSI-Plessey

Disable MSI-Plessey

6.2.14.3 Check and Output Check Digit

No Check

**One Check,MOD10

Two Check MOD10/MOD10

Two Check MOD10/MOD11

**Output Check Digit

No Output Check Digit

6.2.15 PIRSS14

6.2.15.1 **Return to Factory Default Setting**

6.2.15.2 Enable/Disable RSS-14

RSS-14 Default Setting

**Enable RSS-14

Disable RSS-14

6.2.15.3 Output AI (01)

**Output

Not Output

RSS-Limited Default Setting

6.2.16 RSS-Limited

6.2.16.1 Return to Factory Default Setting

6.2.16.2 Enable/Disable RSS-Limited

**Enable RSS-Limited

Disable RSS-Limited

6.2.16.3 Output AI (01)

**Output

No Output

6.2.17 RSS-Expand

6.2.17.1 Return to Factory Default Setting

RSS-Expand Default Setting

6.2.17.2 Enable/Disable RSS-Expand

**Enable RSS-Expand

Disable RSS-Expand

6.3 2D Code Types

6.3.1 PDF417

6.3.1 PDF417

6.3.1.1 Return to Factory Default Setting

PDF417 Default Setting

6.3.1.2 Enable/Disable PDF417

**Enable PDF417

Disable PDF417

6.3.2 Data Matrix

6.3.2.1 Return to Factory Default Setting

Data Matrix Default Setting

6.3.2.2 Enable/Disable Data Matrix

**Enable Data Matrix

Disable Data Matrix

6.3.2.3 Rectangular

**Enable Rectangular

Disable Rectangular

6.3.2.4 Image Support

**Enable Erect Image DM Only

Enable Mirror Image DM only

Enable Both DM

6.3.3 QR Code

6.3.3.1 Return to Factory Default Setting

QR Code Default Setting

6.3.3.2 Enable/Disable Data QR Code

**Enable QR Code

Disable QR Code

6.3.4 Micro QR

6.3.4.1 1 Micro QR Image Support

**Enable Micro QR

Disable Micro QR

Enable Image Micro QR

**Disable Image Micro QR

7. Appendix

7.1 Appendix A: Default Setting Table

Parameters		Defaulted	Remarks
Setting Code			
Function		On	
Information		Not Output	Function Off
Communication			
TTL-232	Baud Rate	9600	
	Check	No Check	
	Data Bit	8 Bits	
	Stop Bit	1 Bit	
	Hardware Fluid Control	No	

参数名称		默认设置	备注
USB Defaulted		USB DATAPIPE	Optional: USB HID-KBW、USB COM Port Emulation、HID-POS
USB HID -KBW	Input Mode	Standard Keyboard Input Mode	
	Keyboard Layout	US Keyboard	
	Unknown Character Beep	Beep	
	Time delay Between Characters	No Delay	
	Caps Lock	Off	

	Conversion	No Conversion	
	Number Mini Keyboard	No Emulation	
Emulation Parameters			
Defaulted Reading Mode		Manual	Optional:Continuous Mode, Sensor Reading Mode, Command Trigger Reading Mode
Continuous Mode	Single Reading Time	3.0s	from: 0.1-25.5s, step 0.1s; 0 no limit long.
	Reading Interval	1.0s	from : 0-25.5s , step 0.1s
Sensor Reading Mode	Single Reading Mode	3.0s	from: 0.1-25.5s, step 0.1s; 0 no limit long.
	Reading Interval	1.0s	from:0-25.5s, step 0.1s
	Image Stable Time	0.4s	from:0-25.5s, step 0.1s
	Sensitivity	Medium	
Command Trigger	Single Reading Mode	3.0s	from: 0.1-25.5s, step 0.1s; 0 no limit time.
LED Light and Aim			

LED Light		Normal	LED On
Aim		Normal	Aim On
Output Beep Character			
All Beep		Speaker On	
Good Read Beep	Beep	On	
	Beep Frequency	Medium	
	Beep Continuous Time	80ms	Optional: 40ms and 120ms
Good Read LED Indicator		On	
Decoding State Prompt		Not Output	"S": good read; "F" failed read. Invalid in USB DATAPIPE mode

Data Forma		
AIM ID Prefix	Prohibit Adding	
Code ID Prefix	Prohibi Adding	
Code ID Type	Original Code	
End Character Suffix	Prohibit Adding	Suffix: CR、CRLF、TAB
Code Parameter		
Enable Inverse Code	Prohibit	
Code 128		
Read	Enable	

UCC/EAN128(GS1128)		
Read	Enable	
AIM 128		
Read	Enable	
EAN8		
Read	Enable	
Check Character	Output	
2 Digit	Disable	
5 Digit	Disable	
Expanded Necessary	No	
Expanded to EAN-13	No	
EAN-13		
Read	Enable	
Check Character	Output	
2 Digit	Disable	
5 Digit	Disable	
Expanded Necessary	No	
LSSN		
Read	Disable	
LSBN		
Read	Enable	
Format	13 Bits	
UPC-E		
Read	Enable	
Check Character	Output	
2 Digit	Disable	

Industrial 25		
Read	Enable	
Check	No Check	
Check Character	No Output	
Code 39		
Read	Enable	
Check	No Check	
Check Character	No Output	
Start and End Character	No Output	
Code 39 Full ASCII	No Support	
Codabar		
Read	Enable	
Check	No Check	
Check Character	No check	
Start and End Character	Output	
Start and End Character Format	ABCD/ABCD	
Code 93		
Read	Enable	
Check	Check	
Check Character	Not Output	
Code 11		
Read	Enable	
Check	1 check, MOD11	
Check Character	Output	
Plessey		
Read	Enable	

5 Digit	Disable	
Expanded Necessary	No	
Expanded to UPC-A	No	
System Character “0”	No Output	
UPGA		
Read	Enable	
Check Character	Output	
2 Digit	Disable	
5 Digit	Disable	
Expanded Necessary	No	
System Character “0”	No Output	
Interleaved 2 of 5		
Read	Enable	
Check	No Check	
Check Character	No Output	
Leading “0”	Output	For odd number length of code 125
ITF-6		
Read	Enable	
Check Character	Output	
ITF-14		
Read	Enable	
Check Character	Output	
Matrix 2 of 5		
Read	Enable	
Check	No Check	
Check Character	No Output	

Check	Check	
Check Character	No output	
MSI Plessey		
Read	Enable	
Check	1 check, MOD10	
Check Character	Output	
RSS-14		
Read	Enable	
AI (Application Identifier)	Output	
RSS Limited		
Read	Enable	

AI (Application Identifier)	Output	
RSS Expand		
Read	Enable	
PDF417		
Read	Enable	
Data Matrix		
Read	Enable	
Rectangular	Enable	
Image Support	Support Erect Image DM only	
QR Code		
Read	Enable	
Micro QR	Allow Enable	

Image Micro QR	Prohibit	

7.2 Appendix B: AIM ID Table

Code Type	AIM ID	Remarks
Code 128	]C0	Normal Code 128 Data
UCC/EAN 128 (GS1128)	]C1	FNC1 at first code
AIM 128	]C2	FNC1 at second code
EAN8	]E4	Normal EAN-8 Data
	]E4…]E1…	EAN-8 add 2 digit
	]E4…]E2…	EAN-8 add 5 digit
EAN13	]E0	Normal EAN-13
	]E3	EAN-13 add 2/5 digit
ISSN	]X5	
ISBN	]X4	
UPC-E	]E0	Normal UPC-E
	]E3	UPC-E add 2/5 digit
UPC-A	]E0	Normal UPC-A
	]E3	UPC-A add 2/5 digit
Interleaved 2 of 5	]I0	No check
	]I1	Check and output check character
	]I3	Check and no output check character
ITF-6	]I1	output check character
	]I3	no output check character
ITF-14	]I1	output check character

	]I3	no output check character
Matrix 2 of 5	]X1	No check
	]X2	Check and output check character
Matrix 2 of 5	]X3	Check and no output check character
Industrial 25	]S0	No special specified
Standard 25	]R0	No check
	]R8	MOD 7 check and no output check character
	]R9	MOD 7 check and output check character
Code 11	]H0	MOD11 check single character and output check character
	]H1	MOD11/MOD11 check two character and output check character
	]H3	Check but no output check character
	]H8	MOD11/MOD9 check two character and output check character

Code 39	]A0	No check, no Full ASCII expanded.output original data.
	]A1	MOD 43 check and output check character
	]A3	MOD 43 check and no output check character
	]A4	Expand Full ASCII but no check
	]A5	Expanded,MOD43 check and output check character
	]A7	expanded, MOD43 check and no output check character
Codabar	]F0	Standard data
	]F2	Check and output check character
	]F4	Check and no output check character
Code 93	]G0	No special specified

	]H9	No check
Plessey	]P0	No specified
MSI Plessey	]M0	MOD10 check and output check character
MSI Plessey	]M1	MOD10 check but no output check character
	]M7	MOD10 /MOD11 check but no output check character
	]M8	MOD10 /MOD11 check and output check character
	]M9	No check
RSS14/RSS Limited/RSS Expand	]e0	
PDF417	]L0	Accord with 1994 PDF417 code standard

Data Matrix	]d0	DM ECC 000 - 140
	]d1	DM ECC 200
	]d2	DM ECC 200, FNC1 at no.1 or no.5
	]d3	DM ECC 200, FNC1 at no.2 or no.6
	]d4	DM ECC 200 support ECI
	]d5	DM ECC 200, FNC1 at no.1 or no.5 and support ECI
	]d6	DM ECC 200, FNC1 at no.2 or no.6 and support ECI
QR Code	]Q0	QR code mode 1 (accord with AIM ISS 97-001)
	]Q1	QR code mode 2(2005 symbol), not use ECI
	]Q2	QR code mode 2(2005 symbol),use ECI
	]Q3	QR code mode 2(2005 symbol),not use ECI , FNC1 at no.1.

	]Q4	QR code mode 2(2005 symbol),use ECI, FNC1 at no.1
	]Q5	QR code mode 2(2005 symbol),not use ECI, FNC1 at no.2
QR Code	]Q6	QR code mode 2(2005 symbol), use ECI, FNC1 at no.2

Reference：ISO/IEC 15424-2008 IT - Auto ID and Data acquisition technology-data carrier identifier (including symbol identifier)

7.3 Appendix C：Code ID

Code Type	Code ID (original)	Code ID(visible character)
Code 128 FNC3	1	A(0x41)
Code 128	2	B(0x42)
UCC/EAN 128	3	C(0x43)
EAN-8	4	D(0x44)
EAN-13	5	E(0x45)
UPCE	6	F(0x46)
UPCA	7	G(0x47)
Interleaved 2 of 5	8	H(0x48)
ITF-14	9	I(0x49)
ITF-6	10	J(0x4A)
Code 39	13	M(0x4D)
Codabar	15	O(0x4F)
Standard 25	16	P(0x50)

Code 93	17	Q(0x51)
AIM 128	21	U(0x55)
MSI Plessey	22	V(0x56)
ISBN	23	W(0x57)
Industrial 25	24	X(0x58)
Matrix 2 of 5	25	Y(0x59)
RSS14	26	Z(0x5A)
RSS Limited	27	[(0x5B)
RSS Expand	28	\(0x5C)
Code 11	29	](0x5D)
Plessey	30	^(0x5E)
ISSN	31	_(0x5F)
PDF417	32	`(0x60)
QR	33	a(0x61)
Data Matrix	35	c(0x63)

7.4 Appendix D：Parameter setting example

The following example is to set the parameter with the setting code. Read ‘xxxxx’ means to read the setting.

7.4.1 Single reading time setting

For example: set the single reading time is 5.0s,

please scan the code as below by order:

(1) read “change single reading time”

(2) read data code“5 ”and“0”

(3) read “save”。

7.4.2 Reading interval setting

For example: set the reading interval is 5.0s, please scan the code as below by order:

(1) read "change reading interval time"。 (2) read data code "5" and "0" (3) read "save"。

7.4.3 Image stable time setting

For example: set the image stable time as 5.0s, please scan the code as below by order:

(1) read "change image stable time"。 (2) read data code "5" and "0"。 (3) read "save"。

7.4.4 Customs sensitivity setting

For example: set the sensitivity as 5, please scan the code as below by order:

(1) read "customs sensitivity"。

(2) read data code "5"

(3) read "save" 。

7.5 Appendix E: Data Code

0~5

0

1

2

3

4

5

6~9

6

7

8

9

A~F

A

B

C

D

E

F

7.6 Appendix F: Save or Cancel

Scan “Save” after scan the data code to store the data you have scanned, you can scan “Cancel” once you scan the wrong data.

For example you scan some setting code, and scan “1” “3” by order, and you scan “Cancel a previous data” “2” you will cancel “3”; if you scan “Cancel previous bunch of data”, “1 23” will be canceled.

Save

Cancel a previous data

Cancel previous bunch of data

0～5