

USER GUIDE

Guangzhou Yoko Electron Co., Ltd.
This User Guide Applies to MP2200(H)

V 1.10

About This User Guide

Pls read all the content of the user guide carefully to use the products safely and effectively. You are advised of keeping it properly for your using reference.

Disclaimer

Please do not dismantle the product or tear up the seal on it, otherwise we won't provide warranty or replacement service.

The pictures in this user guide are for reference only. If there are any pictures which not match the actual product, please take actual products as the standard. Updated information is subject to change without notice.

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1、Product Introduction

This user guide applies to M4A(E2000A)、EP2000A、MK30, which identify 1D&2D barcodes by 2D image scanning pattern, and apply the complete set of patent technology developed by Guangzhou YOKO Electron Co., Ltd. The scanners above are of strong identification capability, and support automatic continuous scanning mode with fast and flexible scanning speed.

In this chapter, we will introduce the instruction of scanner with pictures, please compare to the scanner you bought when reading this user guide, which is good for your understanding. This chapter applies to regular users, maintenance personnel, and software developers.

1.1 Main feature

- * Complete independent research and development, possessing the complete set of patent, plug and play without the need to install driver.
- * Wide voltage design to avoid the data can't be transmitted due to voltage fluctuation.
- * 32-bit master chip equipped with patented software, the scanner can smoothly decode reflective, wrinkled, blurred, and colorful barcode, and can also normally scan in light and dark environment.
- * Adopt all tantalum capacitors and anti-oxidation optical technology, avoiding the problem of performance declining after long-term using.

1.2 Unpack your device

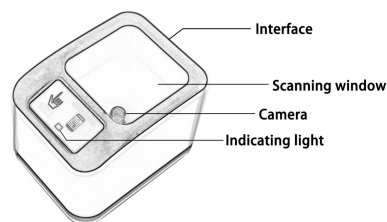
After you open the shipping carton containing the product, take the following steps:

- Take the accessories for scanner out from package.
- Check with the packing list to see if everything is complete and in good condition.
- If there are any damaged or missing components, please keep the original package and contact your supplier for after-sales service.

1.3 External view

1.3.1 External view

MP2200(H)



1.4 Communication port

The scanner must be connected to a host to operate. Host can be a PC, POS machine, intelligent terminal with USB or RS-232 interface.

USB

USB interface on host



RS-232

RS-232 interface on
host



1.5 Start-up, shutdown and restart

Start-up: Connect host computer with scanner, which will automatically start-up and in working state.

Shutdown: Remove the data cable which is connected with scanner; remove the USB which is connected with host computer.

Restart: If the scanner crashes or doesn't respond, please switch it off and restart.

1.6 Maintenance

* The window must be kept clean, the supplier do not bear the guarantee responsibility due to the improper maintenance.

* Avoid the window being wear and tear or scratched by hard object

* Use the hairbrush to remove the stain on the window

* Clean the window with a soft cloth, such as lens cleaning cloth

* Spraying liquid onto the window is prohibited.

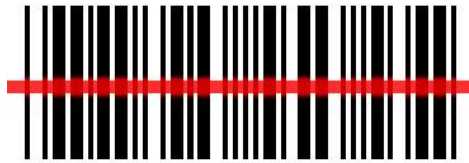
* Prohibit any cleaning solvents, except for the cleaning water.

1.7 Reading skills

If the barcode is small, it should be closer to the scanning window; if the barcode is large, it should be far away from the scanning window a little more, thus easier to be read correctly.

If the barcode is highly reflective (for example, the coated surface), you may need to tilt the barcode at an angle to successfully scan it.

Barcode scanning example:



2、barcode setting

Option and function setting mainly through reading a series of special barcodes. In this chapter, we will provide you a detailed introduction of the options and functions available for user setting, and the corresponding setup code.

This method of setting the scanning is direct, easy to understand and user friendly.

2.1 Mark setting



2.2 Parameter Configuration

To restore Factory Default Configuration or Default Configuration 1-5, scan the appropriate bar code below.

Set Factory Defaults - Scan this bar code to restore the factory default values listed in Table 4-6.

2.2.1 Restore Factory Defaults



Note: Default configurations of the scan engine depend on factory default configuration.

Default Configuration1

The parameter is main for the POS,.

Communication Mode: Serial port

Trigger Mode: Key holding.

Terminator: Disable



2.2.2 Default Configuration2

The parameter is main for Self-help parameter configuration,

Communication Mode: USB KBW

Trigger Mode: Auto-induction

Terminator: Auto newline(\r\n)



2.2.3 Default Configuration5

Not yet enabled



2.3 Duration in Scanning

parameter # 0x88

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.50 to 25.5 seconds.

To set a duration in scanning, scan the bar code below. Next scan three Numeric Bar Codes in appendix that correspond to the desired on time. Single digit numbers must have a leading zero. For example, to set an on time of 0.5 seconds, scan the bar code below, then scan the "0", "0" and "5" bar codes; to set an on time of 10.5 seconds, scan the bar code below, then scan the "1", "0" and "5" bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



2.4 Power mode

parameter # 0x80

This parameter determines the power mode of the engine.

In Low Power mode, the scan engine enters into a low power consumption Sleep power state whenever possible (provided all WAKEUP commands were released). See Power Management .

In Continuous Power mode, the scan engine remains in the Awake state after each decode attempt (see Power Management).

The Sleep and Awake commands (see SLEEP and WAKEUP) can be used to change the power state in either the Low Power mode or the Continuous Power mode.



2.5 Trigger mode

parameter # 0x8A

(Level) Key Holding

Press the button to trigger the reading, release the button to end the reading. Reading success or reading time over a single reading time will end the reading.

(Pulse) Single Key Trigger

Detects the change of the key level (Maintain 30ms, depending on the product)to start reading, and then detects the change of the key level (Maintain 30ms, depending on the product)again to end reading. Reading success or reading time over a single reading time will end the reading.

Continuous Mode

The reading engine performs continuous work. Reading success or reading time over a single reading time will end the reading. More than the specified time will automatically trigger the next reading.

Automatic Induction Mode

In automatic induction mode, the scan engine detects the brightness of the surroundings. Trigger reading when the brightness changes. Reading success or reading time over a single reading time will end the reading. Regardless of the last success or failure to read, re-enter the detection of the surrounding environment brightness.

Host

Through the command to trigger the scan engine to read, also through the command to trigger the scan engine to end reading. Reading success or reading time over a single reading time will end the reading.

Note: Key Trigger(Level and Pulse) still valid in other modes



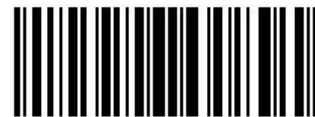
2050200
Level
(0X00)



2050202
Pulse
(0X02)



2050204
Continuous
(0X04)



2050209
Automatic Induction Mode
(0x09)



2050208
Host mode
(0X08)



205020A
(0x0A)
Button Continuous
scanning mode

2.6 Interval Time

parameter # 0x89

The interval time between two readings in continuous mode. Regardless of the last success or failure to read, more than the specified time will automatically trigger the next reading.

Default: 500ms, unit: 100ms, range: 0-9900ms

To set an Interval Time, scan the bar code below. Next scan two Numeric Bar Codes in appendix that correspond to the desired time-out. Single digit values must have a leading zero. For example, to set a time-out of 0.5 seconds, scan the bar code below, then scan the “0” and “5” bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



2.7 Beeper Volume

parameter # 0x8C



Volume low
(0x02)



Volume medium
(0x01)



Volume high (default)
(0x00)

2.8 Beep After Good Decode

parameter # 0x38

Scan this symbol to set the scan engine to beep after a good decode.



1040021

Beep After Good Decode (default)
(0x01)

Scan this symbol to set the scan engine not to beep after a good decode. The beeper still operates during parameter menu scanning and indicates error conditions.



1040020

Do Not Beep After Good Decode
(0x00)

2.9 Terminator setting

parameter # 0xF2 0x05

Add character format: Decode Data+Terminator.



3030050

Disable (default)
(0x00)



3030051

#&CRLF
(0x01)



3030052

%CR
(0x02)



3030053

TAB
(0x03)



3030054

CR CR



3030055

CR LF CR LF
(0x05)

2.10 Indicator Light Function

parameter # 0xF2 0x0Ai

scan the appropriate bar code below to set indicator light function.



30300A0
Good Decode (default)
(0x00)



30300A1
Power LED
(0x01)

2.11 LED After Good Decode

parameter # 0xF2 0x0B

To enable or disable LED after good decode, scan the appropriate bar code below.



30300B0
Disable
(0x00)



30300B1
Enable (default)
(0x01)

2.11.1 Mute

parameter # 0xF2 0x0C

To enable or disable close all prompt, scan the appropriate bar code below.



30300C0
Disable (default)
(0x00)



30300C1
Enable
(0x01)

2.12 Boot prompt

parameter # 0xF2 0x0D



Disable
(0x00)



Enable (default)
(0x01)

2.13 Setup Code Prompt

parameter # 0xF2 0x0E



Disable
(0x00)



Enable (default)
(0x01)

2.14 Transmit “No Read” Message

parameter # 0x5E

Enable this option to transmit “NR” if a symbol does not decode during the timeout period or before the trigger is released. Any enabled prefix or suffixes are appended around this message.



Enable no read
(0x01)

当此功能Disable 时，就算条形码无法解码也无法发送任何消息给主机。



Disable no read (default)
(0x00)

2.15 Parameter Scanning

parameter # 0xEC

To disable decoding of parameter bar codes, scan the bar code below. The Set Defaults parameter bar code can still be decoded. To enable decoding of parameter bar codes, either scan Enable Parameter Scanning below, Set Factory Defaults or set this parameter to 0x01 via a serial command.



Enable Parameter
Scanning (default)
(0x01)



Disable Parameter
Scanning
(0x00)

2.16 Send Setting Code

parameter # 0xF1 0x71

Enable Send Setting Code to transmit bar codes in the following format, in Code 128, to the host:

<FNC3>L<any length data>

<FNC3>B<12 characters of data>

Note that the special Code 128 character <FNC3> must appear at the beginning of this data. However, if the appropriate data does not follow this as shown above, it does not transmit to the host device.



Enable Send Setting Code
(0x01)



Disable Send Setting Code (default)
(0x00)

2.17 Linear Code Type Security Level

parameter # 0x4E

The scan engine offers four levels of decode security for linear code types (e.g. Code 39, Interleaved 2 of 5). Select higher security levels for decreasing levels of bar code quality. As security levels increase, the scan engine's aggressiveness decreases.

Select the security level appropriate for your bar code quality.

2.17.1 Linear Security Level 1

The following code types must be successfully read twice before being decoded:



Linear Security Level 1 (default)
(0x01)

Table 3-1 表3-2

Code Type	Length
Codabar	All
MSI	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

2.17.2 Linear Security Level 2

All code types must be successfully read twice before being decoded.



Linear Security Level 2
(0x02)

2.17.3 Linear Security Level 3

Code types other than the following must be successfully read twice before being decoded. The following codes must be read three times:



Table 3-2 表3-3

Code Type	Length
MSI	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

2.17.4 Linear Security Level 4

All code types must be successfully read three times before being decoded.



2.18 Invoice Function

Open the invoice function, automatically shut down CODE128 code, if you need to read CODE128, can open CODE128.

2.18.1 Automatic Filling of Value-added Tax Invoice

parameter # 0xF2 0x08



2.18.2 Invoice Type

parameter # 0xF2 0xAA



3030AA0

**Special Invoice
(default)**



3030AA1

**Plain Invoice
(0x01)**

2.19 Transmit Code ID Character

parameter # 0x2D

A code ID character identifies the code type of a scanned bar code. This can be useful when decoding more than one code type. The code ID character is inserted between the prefix character (if selected) and the decoded symbol.

Select no code ID character, a Symbol Code ID character, or an AIM Code ID character. The Symbol Code ID characters are listed below; see AIM Code Identifiers.

A = UPC-A, UPC-E, EAN-8, EAN-13

B = Code 39, Code 32

C = Codabar

D = Code 128, ISBT 128, AIM128

E = Code 93

F = Interleaved 2 of 5/ITF, ITF14

G = Industrial 2 of 5, Standard 2 of 5

H = Code11

J = MSI, MSI/Plessey

K = UCC/EAN-128/GS1-128

L = Bookland EAN/ISBN, ISSN

M = Trioptic Code 39

N = Coupon Code

R = GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, RSS

S = SETUP128

w = Deutsche14

I = Deutsche12

o = NEC25/COOP25

V = Matrix 25

r = PDF417

u = DataMatrix(DM)

q = QR

a = Aztec Code

x = Maxi Code

v = Veri Code

c = HanXin



2051702

Code ID
(0x02)



2051701

AIM ID
(0x01)



2051700

None (default)
(0x00)

2.20 Prefix/Suffix Values

parameter # P = 0x69, S1 = 0x68, S2 = 0x6A

A prefix and/or one or two suffixes can be appended to scan data for use in data editing. To set these values, scan a four-digit number (i.e. four bar codes) that corresponds to ASCII values. See the Table 4-3 and Numeric Bar Codes in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix. To set the Prefix/Suffix values via serial commands, see Setting Prefixes and Suffixes Via Serial Commands.

NOTE In order to use Prefix/Suffix values, the Scan Data Transmission Format must be set.



50C0107

Scan Prefix



50C0006

Scan Suffix 1



50C0208

Scan Suffix 2



6Q

Data Format Cancel

2.21 Scan Data Transmission Format

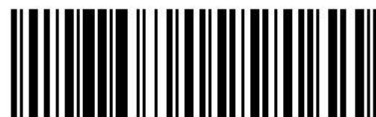
parameter # 0xEB

To change the Scan Data Transmission Format, scan one of the eight bar codes corresponding to the desired format.



20C1000

Data As Is (default)
(0x00)



20C1001

<DATA><SUFFIX 1>
(0x01)



20C1002

<DATA><SUFFIX2>
(0x02)



20C1003

<DATA> <SUFFIX 1><SUFFIX 2>
(0x03)



20C1004

<PREFIX> <DATA >
(0x04)



20C1005

<PREFIX> <DATA> <SUFFIX 1>
(0x05)



20C1006

<PREFIX> <DATA> <SUFFIX 2>
(0x06)



20C1007

<PREFIX> <DATA> <SUFFIX 1> <SUFFIX 2>
(0x07)

2.22 Serial Parameters

2.22.1 Baud Rate

Baud rate is the number of bits of data transmitted per second. The scan engine's baud rate setting should match the data rate setting of the host device. If not, data may not reach the host device or may reach it in distorted form.



2090103

**Baud Rate1200
(0x03)**



2090104

**Baud Rate2400
(0x04)**



2090105

**Baud Rate4800
(0x05)**



2090106

**Baud Rate9600 (default)
(0x06)**



2090107

**Baud Rate19,200
(0x07)**



2090108

**Baud Rate38,400
(0x08)**



2090109

**Baud Rate57600
(0x09)**



209010A

**Baud Rate115200
(0x0A)**

2.23 Parity

parameter # 0x9E

A parity check bit is the most significant bit of each ASCII coded character. Select the parity type according to host device requirements.

If you select ODD parity, the parity bit has a value 0 or 1, based on data, to ensure that an odd number of 1 bits is contained in the coded character.



2090300

Odd
(0x00)

If you select EVEN parity, the parity bit has a value 0 or 1, based on data, to ensure that an even number of 1 bits is contained in the coded character.



2090301

EVEN
(0x01)

Select MARK parity and the parity bit is always 1.



2090302

Mark
(0x02)

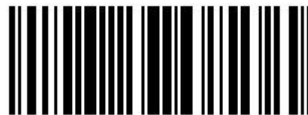
Select SPACE parity and the parity bit is always 0.



2090303

Space
(0x03)

If no parity is required, select NONE.



2090304

NONE (default)
(0x04)

2.24 Software Handshaking

Parameter # 0x9F

This parameter offers control of the data transmission process in addition to that offered by hardware handshaking. Hardware handshaking is always enabled and cannot be disabled by the user.

2.24.1 Disable ACK/NAK Handshaking

When this option is selected, the scan engine neither generates nor expects ACK/NAK handshaking packets.



2090400
Disable ACK/NAK
(0x00)

2.24.2 Enable ACK/NAK Handshaking

When this option is selected, after transmitting data, the scan engine expects either an ACK or NAK response from the host. The scan engine also sends ACKs or NAKs messages to the host.

The scan engine waits up to the programmable Host Serial Response Time-out to receive an ACK or NAK. If the scan engine does not get a response in this time, it resends its data up to two times before discarding the data and declaring a transmit error.



2090401
***Enable ACK/NAK**
(0x01)

2.25 Decode Data Packet Format

Parameter # 0xEE

This parameter selects whether decoded data is transmitted in raw format (unpacked), or transmitted with the packet format as defined by the serial protocol.

If the raw format is selected, ACK/NAK handshaking is disabled for decode data.



1040610
***Send Raw Decode Data**
(0x00)



1040611
Send Packeted Decode Data
(0x01)

2.26 Host Serial Response Time-out

Parameter # 0x9B

This parameter specifies how long the scan engine waits for an ACK or NAK before resending. Also, if the scan engine wants to send, and the host has already been granted permission to send, the scan engine waits for the designated time-out before declaring an error.

The delay period can range from 0.0 to 9.9 seconds in 0.1 second increments. After scanning the bar code below, scan two [Numeric Bar Codes](#) in appendix. Values less than 10 require a leading zero. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



3090020063

Host Serial Response Time-out
(Default: 2.0 sec.)

2.27 Stop Bit Select

Parameter # 0x9D

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. Set the number of stop bits (one or two) to match host device requirements.



2090201

*1 Stop Bit
(0x01)



2090202

2 Stop Bits
(0x02)

2.28 Intercharacter Delay

Parameter # 0x6E

The intercharacter delay gives the host system time to service its receiver and perform other tasks between characters. Select the intercharacter delay option matching host requirements. The delay period can range from no delay to 99 msec in 1 msec increments. After scanning the bar code below, scan two [Numeric Bar Codes](#) in appendix to set the desired time-out. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



30C0C20063

Intercharacter Delay
(Default: 0 sec.)

2.29 Host Character Time-out

Parameter # 0xEF

This parameter determines the maximum time the scan engine waits between characters transmitted by the host before discarding the received data and declaring an error. The time-out is set in 0.01 second increments from 0.01 seconds to 0.99 seconds. After scanning the bar code below, scan two [Numeric Bar Codes](#) in appendix to set the desired time-out. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



3090920163
Host Character Time-out
(Default: 200 msec.)

2.30 Communication Mode

Parameter # 0xF2 0x01



3030010
* &Serial Port, UART, TTL, RS232
(0x00)



3030011
% USB KBW
(0x01)



3030012
USB Serial Port
(0x02)



3030013
AUTO UK
(0x03)



3030014
AUTO UV
(0x04)



3030015
Wiegand

(0x05)



3030016

RS485

(0x06)



3030017

AUTO UW

(0x07)



3030018

AUTO UR

(0x08)



3030019

PS2

(0x09)



303001A

TTDATA

(0x0A)



303001B

TTDATA+串口 TTDATA+serial port

(0x0B)

1D module does not support USB KBW and USB serial port

【AUTO_UK】 Automatic mode UK, USB and serial ports output simultaneously (use KBW)

【AUTO_UV】 Automatic mode UV, USB and serial output simultaneously (use USB port)

2.31 Wiegand

Wiegand protocol type

Parameter # 0xF2 0xA4



3030A40

*AUTO
(0x00)



3030A41

WG26
(0x01)



3030A42

WG34
(0x02)



3030A43

WG66
(0x03)

Wiegand 26 Protocol Output Mode

Parameter # 0xF2 0xA5



3030A50

*3+5
(0x00)



3030A51

**Raw Data
(0x01)**

2.32 PS2 Mode PS2

PS2 Operating Mode:

0: AUTO,connect two PS2 device.Default: The external keyboard is valid.The internal is valid when the data is output.

1:Independent PS2,only use internal PS2.

Parameter # 0xF2 0xA6



3030A60

**AUTO
(0x00)**



3030A61

**Independent PS2
(0x01)**

2.33 Floodlight Control

Parameter # 0xF2 0x02



3030020

***Lighting when Read
(0x00)**



3030021

**Always Lighting
(0x01)**



3030022

Always Close
(0x02)

2.34 Positioning lights control (only for 2D)

Parameter # 0xF2 0x03



2.35 Sensitivity Level

Set automatic induction triggering sensitivity
Sensitivity Values Inquire the parameter values returned.
Special: 0,high: 1,Middle: 8,Low: 15, Default: High
Parameter # 0xF2 0x04





3030042

Middle
(0x02)



3030043

Low
(0x03)

2.36 Custom Sensitivity

Set Automatic induction triggering sensitivity, The smaller ,the more sensitive, Values range 00-15

Default: 01

Parameter #0xF3 0x01



3F30000001

Custom Sensitivity

For example:

Set sensitivity is 2

Scan the custom sensitivity setting code,then scan Numeric Bar Codes 0 and 2

2.37 Stability of Induction Time

Stability of induction time, Default: 500ms, unit:100ms, range: 0-9900ms

Parameter #0xF3 0x02



3F30000002

Stability of Induction Time

For example:

Set stability of induction time is 200ms

Scan stability of induction time setting code,then scan Numeric Bar Codes 0 and 2

Set stability of induction time is 1500ms

Scan stability of induction time setting code,then scan Numeric Bar Codes 1 and 5

2.38 Output Interval of The Same Code

To avoid reading the same barcode multiple times in continuous mode and automatic induction mode, set the scan engine to allow reading the same barcode after a delay.

Output interval of the same code is to refuse to read the same barcode within the set length of time.

Default: 500ms,unit:100ms,range: 0-9900ms

To set output interval of the same code, scan the bar code below. Next scan two Numeric Bar Codes in appendix that correspond to the desired time-out. Single digit values must have a leading zero. For example, to set a time-out of 0.5 seconds, scan the bar code below, then scan the "0" and "5" bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.

Parameter #0xF3 0x03



Output Interval of The Same Code

For example:

Set output interval of the same code is 200ms

Scan output interval of the same code setting code, then scan Numeric Bar Codes to set 0 and 2

Set output interval of the same code is 1500ms

Scan output interval of the same code setting code, then scan Numeric Bar Codes 1 and 5

2.39 1D identifies two barcodes 1D

1D barcode scan engine identifies two barcodes at the same time, There must be two barcodes read at the same time otherwise reading failure (setting code can only be read one).

Parameter # 0xF2 0x10



* Disable
(0x00)



Enable
(0x01)

2.40 Output Product Information

Parameter # 0xF4 0x01



2.41 Output Character Set Type

0: Primitive Type

1:GBK(GB2312)

2: UTF8

Default: 0(**Primitive Type**)

Parameter # 0xF2 0x06



3030060

***Primitive Type
(0x00)**



3030061

**GBK(GB2312)
(0x01)**



3030062

**UTF8
(0x02)**

2.42 Input Character Set Type

Parameter # 0xF2 0xAB



3030AB0

***AUTO
(0x00)**



3030AB1

**GBK(GB2312)
(0x01)**



3030AB2

**UTF8
(0x02)**



3030AB3

ASCII
(0x03)

2.43 USB Type

USB type,0: USB1.1(Full Speed), 1:USB2.0(High Speed),Default USB1.1

Parameter # 0xF2 0x0F



30300F0

*USB1.1(Full Speed)
(0x00)



30300F1

USB2.0(High Speed)
(0x01)

2.44 Keyboard

Country/Language Keyboard

Parameter #0xF6 0x01



6060101

*American Keyboard *
(0x01)



6060102

Belgium
(0x02)



6060106

**Denmark
(0x06)**



6060107

**Finland
(0x07)**



6060108

**France
(0x08)**



6060109

**Austria, Germany
(0x09)**



606010D

**Italy
(0x0D)**



6060110

**Norway
(0x10)**



6060112

**Portugal
0x12**



6060114

Russia
(0x14)



6060116

Spain
(0x16)



6060117

Sweden
(0x17)



6060119

Turkey_F
(0x19)



606011A

Turkey_Q
(0x1A)



606011B

England
(0x1B)



606011C

Japan

(0x1C)

Time interval that keyboard outputs character

Time interval that keyboard outputs character, range: 0-1000ms,unit: 5ms,default: 5ms

Parameter #0xF3 0x04



For example:

Time interval: 100ms

First scan the setting code above,then scan '0', '2', '0' numeric barcodes in order.

Quick Settings of Keyboard Output Time Interval

Parameter # 0xF2 0xB2



Letter case conversion

If set to "Case Inversion", the uppercase of the output data will be lowercase, lowercase letters will be uppercase; If set to "all uppercase", regardless of whether the letters in the output data are uppercase or lowercase, all converted to uppercase letters; If set to "all lowercase", regardless of whether the letters in the output data is uppercase or lowercase, all converted to lowercase letters.

Parameter #0xF2 0xA1





3030A11

All Uppercase
(0x01)



3030A12

All Lowercase
(0x02)



3030A13

Case Inversion
(0x03)

Output Ctrl Combination Key

After opening the function, the ASCII control character between 0x00~0x1F becomes the output Ctrl combination control key. The specific combination keys refer to the attachment.

Parameter # 0xF2 0xAD



3030AD0

Disable *
(0x00)



3030AD1

Enable
(0x01)

Keyboard Type

Enable virtual keyboard, you can output the correct data in any keyboard language mode. When using virtual keyboard, you must ensure that the keypad keys are valid

Parameter # 0xF2 0xB4



3030B40
Standard Keyboard
(0x00)



3030B41
Virtual Keyboard
(0x01)

2.45 Event Report

Send Event Report Command refers to EVENT in SSI Commands.

Boot Event

Parameter # 0xF2 0xA2



3030A20
*Disable
(0x00)



3030A21
Enable
(0x01)

Trigger Event

When scan engine triggers reading, it can be prompted by a command or GPIO pin. The GPIO pin is prompted to remain low until the end of the reading

Parameter # 0xF2 0xA3



3030A30
Disable
(0x00)



3030A31

**Eable Event
(0x01)**



3030A32
**Eable GPIO Pin Event
(0x02)**



3030A33
**Enable Event&GPIO Pin Event
(0x03)**

2.46 Setting Code Password Mode

Enable setting code password mode, then scan setting code after inputting right password. Once input right password, this time boot is valid.

Note: 2 password(00-99)

Enable Setting Code Password Mode

Parameter # 0xF2 0xA7



3030A70
***Disable
(0x00)**



3030A71
**Enable
(0x01)**

Input Setting Code Password

2 Password, From 0-9

Parameter # 0xF3 0x05

Scan below barcode to input setting code password. Next scan two Numeric Bar Codes in appendix that correspond to required password. Single digit numbers must have a leading zero. For example, input password 68, scan below barcode, then scan '6' and '8'. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



3F30000005

Modify Setting Code Password

You can only modify password when you enable Setting Code Password Mode.

Parameter # 0xF3 0x06

Scan below barcode to modify setting code password. Next scan two Numeric Bar Codes in appendix that correspond to new password. Single digit numbers must have a leading zero. For example, new password is 96, scan below barcode, then scan '9' and '6'. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Logout Password

After logging out password, you should input password again when you need.

Parameter # 0xF2 0xA9



2.47 Disable passive trigger scanning

Scan below enable barcode, level and host triggers will be disabled.

Parameter # 0xF2 0xA8



2.48 Barcode Global Switch

1D Global Switch

Parameter # 0xF2 0x11





3030111

**Enable
(0x01)**

**2D Global Switch
Parameter # 0xF2 0x50**



3030500

**Disable
(0x00)**



3030501

**Enable
(0x01)**

**All Barcode Switch
Parameter # 0xF2 0x90**



3030900

**Disable
(0x00)**



3030901

**Enable
(0x01)**

2.49 UPC/EAN

Enable/Disable UPC-A/UPC-A

Parameter # 0x01

To enable or disable UPC-A, scan the appropriate bar code below.



1 0 0 0 0 1 1

*Enable UPC-A
(0x01)



1 0 0 0 0 1 0

Disable UPC-A
(0x00)

Enable/Disable UPC-E /UPC-E

Parameter # 0x02

To enable or disable UPC-E, scan the appropriate bar code below.



1 0 0 0 0 2 1

*Enable UPC-E
(0x01)



1 0 0 0 0 2 0

Disable UPC-E
(0x00)

Enable/Disable EAN-8/EAN-8

Parameter # 0x04

To enable or disable EAN-8, scan the appropriate bar code below.



1 0 0 0 0 4 1

*Enable EAN-8
(0x01)



1 0 0 0 0 4 0

Disable EAN-8
(0x00)

Enable/Disable EAN-13

Parameter # 0x03

To enable or disable EAN-13, scan the appropriate bar code below.

扫描以下相对应的条码来设置或EAN-13。



Enable/Disable Bookland EAN(ISBN) /Bookland EAN(ISBN)

Parameter # 0x53

To enable or disable EAN Bookland, scan the appropriate bar code below.

扫描以下相对应的条码来设置或EAN Bookland。



Decode UPC/EAN Supplementals UPC/EAN

Parameter # 0x10

Supplementals are bar codes appended according to specific format conventions (e.g. UPC A+2, UPC E+2, EAN 13+2, EAN 13+5). The following options are available:

- Do not read supplementals – The scan engine can only read the barcode no matter the barcode with supplementals or not.
- Only read the barcode with supplementals- The scan engine can only read the barcode with supplementals.
- Auto read supplementals- The scan engine can not only read the barcode with supplementals, but also read the barcode without supplementals.



2010E00

***Ignore UPC/EAN with Supplementals
(0x00)**



2010E01

**Decode UPC/EAN with Supplementals
(0x01)**



2010E02

**Autodiscriminate UPC/EAN Supplementals
(0x02)**

Transmit UPC-A Check Digit

Parameter # 0x28

Scan the appropriate bar code below to transmit the symbol with or without the UPC-A check digit.



1020021

***Transmit UPC-A Check Digit
(0x01)**



1020020

**Do Not Transmit UPC-A Check Digit
(0x00)**

Transmit UPC-E Check Digit

Parameter # 0x29

Scan the appropriate bar code below to transmit the symbol with or without the UPC-E check digit.



1020031

***Transmit UPC-E Check Digit
(0x01)**



1 020030

**Do Not Transmit UPC-E Check Digit
(0x00)**

UPC-A Preamble

Parameter # 0x22

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-A symbol. Select one of the following options for transmitting UPC-A preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.



2030100

**No Preamble
(<DATA>
(0x00)**



2030101

***System Character
(<SYSTEM CHARACTER> <DATA>
(0x01)**



2030102

**System Character & Country Code
(< COUNTRY CODE> <SYSTEM CHARACTER> <DATA>
(0x02)**

UPC-E Preamble UPC-E

Parameter # 0x23

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-E symbol. Select one of the following options for transmitting UPC-E preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.



2030000

No Preamble
(<DATA>
(0x00)



2030001
*System Character
(<SYSTEM CHARACTER> <DATA>
(0x01)



2030002
System Character & Country Code
(< COUNTRY CODE> <SYSTEM CHARACTER><DATA>
(0x02)

Convert UPC-E to UPC-A

Parameter # 0x25

Enable this parameter to convert UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

Scan **DO NOT CONVERT UPC-E TO UPC-A** to transmit UPC-E (zero suppressed) decoded data.



1020001
Convert UPC-E to UPC-A
(0x01)



1020000
*Do Not Convert UPC-E to UPC-A
(0x00)

EAN-8 Zero Extend EAN-8

Parameter # 0x27

When enabled, this parameter adds five leading zeros to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols.

Disable this parameter to transmit EAN-8 symbols as is.



1020011
Enable EAN-8 Zero Extend

(0x01)



1020010

***Disable EAN-8 Zero Extend**
(0x00)

Bookland ISBN Format

Parameter # 0xF1 0x40

If you enabled Bookland EAN using *Enable/Disable Bookland EAN* , select one of the following formats for Bookland data:

Bookland ISBN-10 - The scan engine reports Bookland data starting with 978 in traditional 10-digit format with the special Bookland check digit for backward-compatibility. Data starting with 979 is not considered Bookland in this mode.

Bookland ISBN-13 - The scan engine reports Bookland data (starting with either 978 or 979) as EAN-13 in 13-digit format to meet the 2007 ISBN-13 protocol.



N02400

***Bookland ISBN-10**
(0x00)



N02401

Bookland ISBN-13
(0x01)

✓ **NOTE** For Bookland EAN to function properly, first enable Bookland EAN using *Enable/Disable Bookland EAN*, then select either Decode UPC/EAN Supplementals, Autodiscriminate UPC/EAN Supplementals, or Enable 978/979 Supplemental Mode in *Decode UPC/EAN Supplementals* .

UPC/EAN Security Level UPC/EAN

Parameter # 0x4D

The scan engine offers four levels of decode security for UPC/EAN bar codes. Increasing levels of security are provided for decreasing levels of bar code quality. Increasing security decreases the scan engine's aggressiveness, so choose only that level of security necessary for the application.

UPC/EAN Security Level 0 UPC/EAN

This default setting allows the scan engine to operate in its most aggressive state, while providing sufficient security in decoding most "in-spec" UPC/EAN bar codes.



2051100

***UPC/EAN Security Level 0**
(0x00)

UPC/EAN Security Level 1 UPC/EAN

As bar code quality levels diminish, certain characters become prone to mis-decodes before others (i.e., 1, 2, 7, 8). If mis-decodes of poorly printed bar codes occur, and the mis-decodes are limited to these characters, select this security level.



UPC/EAN Security Level 2 UPC/EAN 安全级别 2

If mis-decodes of poorly printed bar codes occur, and the mis-decodes are not limited to characters 1, 2, 7, and 8, select this security level.



UPC/EAN Security Level 3 UPC/EAN

If misdecodes still occur after selecting Security Level 2, select this security level. Be advised, selecting this option is an extreme measure against mis-decoding severely out of spec bar codes. Selection of this level of security significantly impairs the decoding ability of the scan engine. If this level of security is necessary, try to improve the quality of the bar codes.



2.50 Code 128

Including AIM128 ,but the output type is different.

Enable/Disable Code 128 /Code 128

Parameter # 0x08

To enable or disable Code 128, scan the appropriate bar code below.





1 0001 00
Disable Code 128
(0x00)

Enable/Disable GS1-128 (formerly UCC/EAN-128)/GS1-128 (原 UCC/EAN-128)

Parameter # 0x0E

To enable or disable GS1-128, scan the appropriate bar code below.



1 0403 31
***Enable GS1-128**
(0x01)



1 0403 30
Disable GS1-128
(0x00)

Enable/Disable ISBT 128 /ISBT 128

Parameter # 0x54

To enable or disable ISBT 128, scan the appropriate bar code below.



1 0003 31
***Enable ISBT 128**
(0x01)



1 0003 30
Disable ISBT 128
(0x00)

Lengths for Code 128

No length setting is required for Code 128.

2.51 Code 39

Enable/Disable Code 39

Parameter # 0x00

To enable or disable Code 39, scan the appropriate bar code below.



1 000001
*Enable Code 39
(0x01)



1 000000
Disable Code 39
(0x00)

Set Lengths for Code 39 Code 39

Parameter # L1 = 0x12, L2 = 0x13

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Code 39 may be set for any length, one or two discrete lengths, or lengths within a specific range. If Code 39 Full ASCII is enabled, **Length Within a Range** or **Any Length** are the preferred options. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

NOTE When setting lengths, single digit numbers must always be preceded by a leading zero.

One Discrete Length - This option limits decodes to only those Code 39 symbols containing a selected length. Lengths are selected from the [Numeric Bar Codes](#) in appendix. For example, to decode only Code 39 symbols with 14 characters, scan **Code 39 - One Discrete Length**, then scan **1** followed by **4**. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



1 01000101370000
Code 39 - One Discrete Length

Two Discrete Lengths - This option limits decodes to only those Code 39 symbols containing either of two selected lengths. Lengths are selected from the [Numeric Bar Codes](#) in appendix. For example, to decode only those Code 39 symbols containing either 2 or 14 characters, select **Code 39 - Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



2 01000100370000
Code 39 - Two Discrete Lengths

Length Within Range - This option limits decodes to only those Code 39 symbols within a specified range. For example, to decode Code 39 symbols containing between 4 and 12 characters, first scan **Code 39 - Length Within Range**. Then scan **0**, **4**, **1**, and **2** according to [Numeric Bar Codes](#) in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Any Length - Scan this option to decode Code 39 symbols containing any number of characters.



Code 39 Check Digit Verification Code 39

Parameter # 0x30

When this feature is enabled, the scan engine checks the integrity of all Code 39 symbols to verify that the data complies with specified check digit algorithm. Only those Code 39 symbols which include a modulo 43 check digit are decoded. Only enable this feature if your Code 39 symbols contain a module 43 check digit.



Transmit Code 39 Check Digit

Parameter # 0x2B

Scan this symbol to transmit the check digit with the data.



Scan this symbol to transmit data without the check digit.



Enable/Disable Code 39 Full ASCII

Parameter # 0x11

Code 39 Full ASCII is a variant of Code 39 which pairs characters to encode the full ASCII character set. To enable or disable Code 39 Full ASCII, scan the appropriate bar code below.



✓ **NOTE** Trioptic Code 39 and Code 39 Full ASCII cannot be enabled simultaneously. If you get an error beep when enabling Code 39 Full ASCII, disable Trioptic Code 39 and try again.

Code 39 Transport Start Character and Terminator

Parameter # 0xF2 0x30



Convert Code 39 to Code 32 (Italian Pharma Code)

Parameter # 0x56

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate bar code below to enable or disable converting Code 39 to Code 32.





1020301

Enable
(0x01)

Code 32 Prefix

Parameter # 0xE7

Enable this parameter to add the prefix character “A” to all Code 32 bar codes. Convert Code 39 to Code 32(Italian Pharma Code) must be enabled for this parameter to function.



1020320

Disable *
(0x00)



1020321

Enable
(0x01)

2.52 Code 93

Enable/Disable Code 93/Code 93

Parameter # 0x09

To enable or disable Code 93, scan the appropriate bar code below.



1000111

Enable Code 93
(0x01)



1000110

*Disable Code 93
(0x00)

Set Lengths for Code 93

Parameter # L1 = 0x1A, L2 = 0x1B

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Code 93 may be set for any length, one or two discrete

lengths, or lengths within a specific range. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **Code 93 One Discrete Length**, then scan **1, 4**, to limit the decoding to only Code 93 symbols containing 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **Code 93 Two Discrete Lengths**, then scan **0, 2, 1, 4**, to limit the decoding to only Code 93 symbols containing 2 or 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Length Within Range - This option sets the unit to decode a code type within a specified range. For example, to decode Code 93 symbols containing between 4 and 12 characters, first scan **Code 93 Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must always be preceded by a leading zero). [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Any Length - Scan this option to decode Code 93 symbols containing any number of characters.



2.53 Code 11

Enable/Disable Code 11

Parameter # 0x0A

To enable or disable Code 11, scan the appropriate bar code below.



(0x01)



1000120

*Disable Code 11

(0x00)

Set Lengths for Code 11 Code 11

Parameter # L1 = 0x1C, L2 = 0x1D

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Set lengths for Code 11 to any length, one or two discrete lengths, or lengths within a specific range.

One Discrete Length - Select this option to decode only Code 11 symbols containing a selected length. Select the length using the *Numeric Bar Codes* in appendix. For example, to decode only Code 11 symbols with 14 characters, scan **Code 11 - One Discrete Length**, then scan **1** followed by **4**. To correct an error or to change the selection, scan *Cancel* in appendix.

Two Discrete Lengths - Select this option to decode only Code 11 symbols containing either of two selected lengths. Select lengths using the *Numeric Bar Codes* in appendix. For example, to decode only those Code 11 symbols containing either 2 or 14 characters, select **Code 11 - Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**. To correct an error or to change the selection, scan *Cancel* in appendix.

Length Within Range - Select this option to decode a Code 11 symbol with a specific length range. Select lengths using the *Numeric Bar Codes* in appendix. For example, to decode Code 11 symbols containing between 4 and 12 characters, first scan **Code 11 - Length Within Range**. Then scan **0**, **4**, **1**, and **2** (single digit numbers must always be preceded by a leading zero). To correct an error or change the selection, scan *Cancel* in appendix.

Any Length - Scan this option to decode Code 11 symbols containing any number of characters within the scan engine capability.



F1010C0D013700012

Code 11 - One Discrete Length



F2010C0D013700012

Code 11 - Two Discrete Lengths



F3010C0D013700012

Code 11 - Length Within Range



F0010C0D013700012

Code 11 - Any Length

Code 11 Check Digit Verification

Parameter # 0x34

This feature allows the scan engine to check the integrity of all Code 11 symbols to verify that the data complies with the specified check digit algorithm. This selects the check digit mechanism for the decoded Code 11 bar code. The options are to check for one check digit, check for two check digits, or disable the feature.

To enable this feature, scan the bar code below corresponding to the number of check digits encoded in your Code 11 symbols.



2051200

*Disable
(0x00)



2051201

One Check Digit
(0x01)



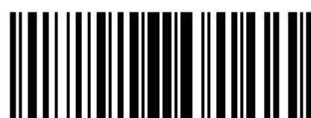
2051202

Two Check Digits
(0x02)

Transmit Code 11 Check Digits

Parameter # 0x2F

This feature selects whether or not to transmit the Code 11 check digit(s).



1020141

Transmit Code 11 Check Digit(s) (Enable)
(0x01)



1020140

***Do Not Transmit Code 11 Check Digit(s) (Disable)**
(0x00)

✓ **NOTE** Code 11 Check Digit Verification must be enabled for this parameter to function.

2.54 Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5/Interleaved 2 of 5

Parameter # 0x06

To enable or disable Interleaved 2 of 5, scan the appropriate bar code below.



1000061

***Enable Interleaved 2 of 5**
(0x01)



1000060

Disable Interleaved 2 of 5
(0x00)

Set Lengths for Interleaved 2 of 5

Parameter # L1 = 0x16, L2 = 0x17

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for I 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

✓ **NOTE** When setting lengths, single digit numbers must always be preceded by a leading zero.

One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **I 2 of 5 One Discrete Length**, then scan **1, 4**, to decode only I 2 of 5 symbols containing 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



10108090244000C

I 2 of 5 - One Discrete Length

Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **I 2 of 5 Two Discrete Lengths**, then scan **0, 6, 1, 4**, to decode only I 2 of 5 symbols containing 6 or 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



20108090244000C

I 2 of 5 - Two Discrete Lengths

Length Within Range - Select this option to decode only codes within a specified range. For example, to decode I 2 of 5 symbols containing between 4 and 12 characters, first scan **I 2 of 5 Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Any Length - Scan this option to decode I 2 of 5 symbols containing any number of characters.

✓ **NOTE** Selecting this option may lead to misdecodes for I 2 of 5 codes.



I 2 of 5 Check Digit Verification

Parameter # 0x31

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm, either USS (Uniform Symbology Specification), or OPCC (Optical Product Code Council).



Transmit I 2 of 5 Check Digit

Parameter # 0x2C

Scan this symbol to transmit the check digit with the data.



1020211

Transmit I 2 of 5 Check Digit (Enable)
(0x01)

Scan this symbol to transmit data without the check digit.



1020210

***Do Not Transmit I 2 of 5 Check Digit (Disable)**
(0x00)

Convert I 2 of 5 to EAN-13

Parameter # 0x52

This parameter converts a 14 character I 2 of 5 code into EAN-13, and transmits to the host as EAN-13. To accomplish this, I 2 of 5 must be enabled, one length must be set to 14, and the code must have a leading zero and a valid EAN-13 check digit.



1020201

Convert I 2 of 5 to EAN-13(Enable) (0x01)



1020200

Do Not Convert I 2 of 5 to EAN-13 (Disable)
(0x00)

2.55 Discrete 2 of 5/Industrial 2 of 5/IND25/

Enable/Disable Discrete 2 of 5/Discrete 2 of 5

Parameter # 0x05

To enable or disable Discrete 2 of 5, scan the appropriate bar code below.



1000051

Enable Discrete 2 of 5
(0x01)



1000050

***Disable Discrete 2 of 5**

Set Lengths for Discrete 2 of 5

Parameter # L1 = 0x14, L2 = 0x15

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for D 2 of 5 may be set for any length, one or two discrete lengths, or lengths within a specific range. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **D 2 of 5 One Discrete Length**, then scan **1, 4**, to decode only D 2 of 5 symbols containing 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **D 2 of 5 Two Discrete Lengths**, then scan **0, 2, 1, 4**, to decode only D 2 of 5 symbols containing 2 or 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Length Within Range - Select this option to decode codes within a specified range. For example, to decode D 2 of 5 symbols containing between 4 and 12 characters, first scan **D 2 of 5 Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must be preceded by a leading zero). [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Any Length - Scan this option to decode D 2 of 5 symbols containing any number of characters.

✓ **NOTE** Selecting this option may lead to misdecodes for D 2 of 5 codes.



2.56 Matrix 25

Enable/Disable Matrix 25/Matrix 25

Parameter # 0xF2 0x20

To enable or disable Matrix 25, scan the appropriate bar code below.



3030201

Enable Matrix 25

(0x01)



3030200

***Disable Matrix 25 (0x00)**

Matrix 25 Check Digit Verification Matrix 25

Parameter # 0xF2 0x21



3030211

Enable Matrix 25 Check Digit Verification (0x01)



3030210

***Disable Matrix 25 Check Digit Verification * (0x00)**

Transmit Matrix 25 Check Character

Parameter # 0xF2 0x22



3030221

Enable Matrix 25 Transmit Check Character

(0x01)



3030220

Disable Matrix 25 Transmit Check Character *

(0x00)

Set Lengths for Matrix 25

Parameter # L1=0xF5 0x00, L2=0xF5 0x01

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Matrix 25 may be set for any length, one or two discrete lengths, or lengths within a specific range. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

◦ **One Discrete Length** - Select this option to decode only those codes containing a selected length. For example, select **Matrix 25 One Discrete Length**, then scan **1, 4**, to decode only Matrix 25 symbols containing 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Matrix 25 - One Discrete Length

Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **Matrix 25 Two Discrete Lengths**, then scan **0, 2, 1, 4**, to decode only Matrix 25 symbols containing 2 or 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Matrix 25 - Two Discrete Lengths

Length Within Range - Select this option to decode codes within a specified range. For example, to decode Matrix 25 symbols containing between 4 and 12 characters, first scan **Matrix 25 Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must be preceded by a leading zero). [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



Matrix 25 - Length Within Range

Any Length - Scan this option to decode Matrix 25 symbols containing any number of characters.

✓ **NOTE** Selecting this option may lead to misdecodes for Matrix 25 codes.



Matrix 25 - Any Length

2.57 Standard 25/IATA 25

Enable/Disable Standard 25/Standard 25

Parameter # 0xF2 0x23

To enable or disable Standard 25, scan the appropriate bar code below.



***Disable Standard 25**
(0x00)



3030231
Enable Standard 25
(0x01)

Standard 25 Check Digit Verification

Parameter # 0xF2 0x24



3030240
*** Disable Standard 25 Check Digit Verification**
(0x00)



3030241
Enable Standard 25 Check Digit Verification
(0x01)

Transmit Check Character

Parameter # 0xF2 0x25



3030250
Disable Standard 25 Transmit Check Character
(0x00)



3030251
Enable Standard 25 Transmit Check Character
(0x01)

Set Lengths for Standard 25

Parameter # L1=0xF5 0x02, L2=0xF5 0x03

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Standard 25 may be set for any length, one or two discrete lengths, or lengths within a specific range. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **Standard 25 One Discrete Length**, then scan **1, 4**, to decode only Standard 25 symbols

containing 14 characters. Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



F1118283F50000003

Standard 25 - One Discrete Length

Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **Standard 25 Two Discrete Lengths**, then scan **0, 2, 1, 4**, to decode only Standard 25 symbols containing 2 or 14 characters. Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



F2118283F50000003

Standard 25 - Two Discrete Lengths

Length Within Range - Select this option to decode codes within a specified range. For example, to decode Standard 25 symbols containing between 4 and 12 characters, first scan **Standard 25 Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



F3118283F50000003

Standard 25 - Length Within Range

Any Length - Scan this option to decode Standard 25 symbols containing any number of characters.
✓ **NOTE** Selecting this option may lead to misdecodes for Standard 25 codes.



F0118283F50000003

Standard 25 - Any Length

2.58 Codabar

Enable/Disable Codabar/Codabar

Parameter # 0x07

To enable or disable Codabar, scan the appropriate bar code below.



1000071

**Enable Codabar Codabar
(0x01)**



1000070

***Disable Codabar Codabar**
(0x00)

Set Lengths for Codabar Codabar

Parameter # L1 = 0x18, L2 = 0x19

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains. Lengths for Codabar may be set for any length, one or two discrete lengths, or lengths within a specific range. To set lengths via serial commands, see Setting Code Lengths Via Serial Commands.

°
One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **Codabar One Discrete Length**, then scan **1, 4**, to decode only Codabar symbols containing 14 characters. Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



10102030237000C

Codabar - One Discrete Length Codabar

Two Discrete Lengths - This option sets the unit to decode only those codes containing two selected lengths. For example, select **Codabar Two Discrete Lengths**, then scan **0, 2, 1, 4**, to decode only Codabar symbols containing 6 or 14 characters. Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



20102030237000C

Codabar - Two Discrete Lengths Codabar

Length Within Range - Select this option to decode a code within a specified range. For example, to decode Codabar symbols containing between 4 and 12 characters, first scan **Codabar Length Within Range**, then scan **0, 4, 1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



30102030237000C

Codabar - Length Within Range

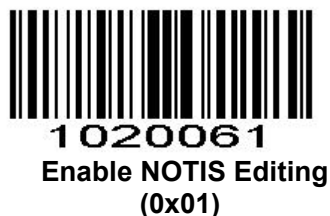
Any Length - Scan this option to decode Codabar symbols containing any number of characters.



NOTIS Editing NOTIS

Parameter # 0x37

When enabled, this parameter strips the start and stop characters from decoded Codabar symbol.



Start Character and Terminator

The start character and terminator are allowed to be one of the four characters of "A", "B", "C", "D". The terminator is also allowed to be one of the four characters of "T", "N", "*", "E".

Parameter # 0xF2 0x31



Letter Case Setting of Start Character and Terminator

Parameter # 0xF2 0x32



(0x00)



3030321

Lowercase

(0x01)

2.59 MSI/MSI PLESSEY

Enable/Disable MSI /MSI

Parameter # 0x0B

To enable or disable MSI, scan the appropriate bar code below.



1000141

Enable MSIMSI

(0x01)



1000140

*Disable MSIMSI

(0x00)

Set Lengths for MSI

Parameter # L1 = 0x1E, L2 = 0x1F

The length of a code refers to the number of characters (i.e., human readable characters) the code contains, and includes check digits. Lengths for MSI can be set for any length, one or two discrete lengths, or lengths within a specific range. See [Table 4-3](#) for ASCII equivalents. To set lengths via serial commands, see [Setting Code Lengths Via Serial Commands](#).

One Discrete Length - Select this option to decode only those codes containing a selected length. For example, select **MSI Plessey One Discrete Length**, then scan **1, 4**, to decode only MSI Plessey symbols containing 14 characters. [Numeric Bar Codes](#) is in appendix. To change the selection or cancel an incorrect entry, scan [Cancel](#) in appendix.



F1010F10013700014

MSI - One Discrete Length

Two Discrete Lengths - Select this option to decode only those codes containing two selected lengths. For example, select **MSI Plessey Two Discrete Lengths**, then scan **0, 6, 1, 4**, to decode only MSI Plessey

symbols containing 6 or 14 characters. Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



F2010F10013700014

MSI - Two Discrete Lengths

Length Within Range - Select this option to decode codes within a specified range. For example, to decode MSI symbols containing between 4 and 12 characters, first scan **MSI Length Within Range**, then scan **0**, **4**, **1** and **2** (single digit numbers must always be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



F3010F10013700014

MSI - Length Within Range

Any Length - Scan this option to decode MSI Plessey symbols containing any number of characters.

✓ **NOTE** Selecting this option may lead to misdecodes for MSI codes.



F0010F10013700014

MSI - Any Length

MSI Check Digits

Parameter # 0x32

These check digits at the end of the bar code verify the integrity of the data. At least one check digit is always required. Check digits are not automatically transmitted with the data.



1020120

*One MSI Check Digit
(0x00)

If two check digits are selected, also select an MSI Check Digit Algorithm.



1020121

Two MSI Check Digit
(0x01)

Transmit MSI Check Digit

Parameter # 0x2E

Scan this symbol to transmit the check digit with the data.



1020131

Transmit MSI Check Digit (Enable)
(0x01)

Scan this symbol to transmit data without the check digit.



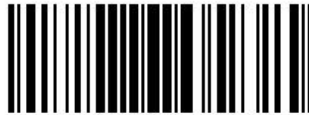
1020130

***Do Not Transmit MSI Check Digit (Disable)**
(0x00)

MSI Check Digit Algorithm MSI

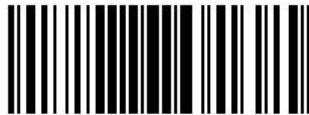
Parameter # 0x33

When the Two MSI check digits option is selected, an additional verification is required to ensure integrity. Select one of the following algorithms.



1020230

MOD 10/ MOD 11
(0x00)



1020231

***MOD 10/ MOD 10**
(0x01)

2.60 GS1 DataBar/RSS

Enable/Disable GS1 DataBar-14 /GS1 DataBar-14

Parameter # 0xF0 0x52

To enable or disable GS1 DataBar-14, scan the appropriate bar code below.



1000351

Enable GS1 DataBar-14 GS1 DataBar-14
(0x01)



1000350

***Disable GS1 DataBar-14GS1 DataBar-14
(0x00)**

Enable/Disable GS1 DataBar Limited/GS1 DataBar Limited

Parameter # 0xF0 0x53

To enable or disable GS1 DataBar Limited, scan the appropriate bar code below.



1000361

Enable GS1 DataBar Limited (0x01)



1000360

***Disable GS1 DataBar Limited
(0x00)**

Enable/Disable GS1 DataBar Expanded/GS1 DataBar Expanded

Parameter # 0xF0 0x54

To enable or disable GS1 DataBar Expanded, scan the appropriate bar code below.



1000371

Enable GS1 DataBar Expanded (0x01)



1000370

***Disable GS1 DataBar Expanded
(0x00)**

2.61 PDF417

Scan normal or mirror image picture.

Enable/Disable PDF417/PDF417

Parameter # 0x0F

To enable or disable PDF417, scan the appropriate bar code below.



1000170

Disable PDF417
(0x00)



1000171

***Enable PDF417**

Read Multi-code
Parameter # 0xF2 0x60



3030600

***Read Monocode**
(0x00)



3030601

Read Dicode
(0x01)



3030602

Read Monocode /Dicode
(0x02)

Read Normal Phase/ Phase Reversal
Parameter # 0xF2 0x61



3030610

***Read Normal Phase**
(0x00)



3030611

**Read Phase Reversal
(0x01)**



3030612

**Read Normal Phase/ Phase Reversal
(0x02)**

2.62 QR

Read normal phase/ phase reversal/ mirror image picture

Enable/Disable QR /QR

Parameter # 0xF0 0x25

To enable or disable QR, scan the appropriate bar code below.



1003250

**Disable QRCode
(0x00)**



1003251

***Enable QRCode
(0x01)**

Read Multi-code

Parameter # 0xF2 0x65



3030650

***Read Monocode
(0x00)**



3030651

**Read Dicode
(0x01)**



3030652

**Read Monocode /Dicode
(0x02)**

ECI Control

Parameter # 0xF2 0x66



3030660

***Not Output ECI *
(0x00)**



3030661

**Output ECI
(0x01)**

2.63 Data Matrix(DM)

Scan normal or mirror image picture.

Enable/Disable Data Matrix(DM) /Data Matrix(DM)

Parameter # 0xF0 0x24

To enable or disable Data Matrix(DM), scan the appropriate bar code below.



1003240

**Disable DataMatrix
(0x00)**



1003241

***Enable DataMatrix
(0x01)**

Read Multi-code

Parameter # 0xF2 0x6A



30306A0

***Read Monocode
(0x00)**



30306A1

**Read Dicode
(0x01)**



30306A2

**Read Monocode /Dicode
(0x02)**

**Read Normal Phase/ Phase Reversal
Parameter # 0xF2 0x6B**



30306B0

***Read Normal Phase
(0x00)**



30306B1

**Read Phase Reversal
(0x01)**



30306B2

**Read Normal Phase/ Phase Reversal
(0x02)**

**ECI Control
Parameter # 0xF2 0x6C**



30306C0

***Not Output ECI
(0x00)**



30306C1

**Output ECI
(0x01)**

2.64 Maxi Code

Enable/Disable Maxi Code/Maxi Code

Parameter # 0xF0 0x26

To enable or disable Maxi Code, scan the appropriate bar code below.



1003260

***Disable MaxiCodeMaxiCode
(0x00)**



1003261

**Enable MaxiCodeMaxiCode
(0x01)**

2.65 Aztec Code

Enable/Disable Aztec Code/Aztec Code

Parameter # 0xF0 0x28

To enable or disable Aztec Code, scan the appropriate bar code below.



1003280

***Disable Aztec Code
(0x00)**



1003281

**Enable Aztec Code
(0x01)**

2.66 Han Xin Code

Enable/Disable Han Xin Code/Han Xin Code

Parameter # 0xF0 0x2F

To enable or disable Han Xin Code, scan the appropriate bar code below.9+



10032F0

***Disable Han Xin Code
(0x00)**



10032F1

**Enable Han Xin Code
(0x01)**

2.67 Read Multi-code

Parameter # 0xF2 0x70



3030700

***Read Monocode
(0x00)**



3030701

**Read Dicode
(0x01)**



3030702

**Read Monocode /Dicode
(0x02)**

2.68 Read Normal Phase/ Phase Reversal

Parameter # 0xF2 0x71



3030710
*Read Normal Phase
(0x00)



3030711
Read Phase Reversal
(0x01)



3030712
Read Normal Phase/ Phase Reversal
(0x02)

2.69 ISSN

ISSN turns to EAN13 when it's disabled.

Parameter # 0xF2 0x33



3030330
Disable *
(0x00)



3030331
Enable
(0x01)

2.70 PLESSEY

Parameter # 0xF2 0x34



3030340
Disable *
(0x00)



3030341

Enable
(0x01)

3、Appendix

1. SSI Commands

Table 1-1 SSI Commands

Name	Type	Opcode	Description	Support
CMD_ACK	H/D	0xD0	Effective response	Yes
CMD_NAK	H/D	0xD1	Invalid response	Yes
DECODE_DATA	D	0xF3	Decode data(only for 1D barcode)	Yes
LED_OFF	H	0xE8	Close LED	Yes
LED_ON	H	0xE7	Open LED	Yes
PARAM_DEFAULTS	H	0xC8	Restore default parameters of the SE series	Yes
PARAM_REQUEST	H	0xC7	Request one parameter of the SE series	Yes
PARAM_SEND	H/D	0xC6	Send one parameter of the SE series	Yes
REQUEST_REVISION	H	0xA3	Request the engine's software version message	Yes
REPLY_REVISION	D	0xA4	Reply the engine's software version message	Yes
SCAN_DISABLE	H	0xEA	Disable scanning	Yes
SCAN_ENABLE	H	0xE9	Enable scanning	Yes
SLEEP	H	0xEB	Sleep state	Yes
START_DECODE	H	0xE4	Start decoding	Yes
STOP_DECODE	H	0xE5	Stop decoding	Yes
WAKEUP	H	N/A	Wakeup	Yes
RESET	H	0xFA	Reset	Yes
EVENT	D	0xF6	Event indicated by associated event code	Yes

[Table 1-2](#) shows the general packet format for SSI messages, and [Table 1-3](#) lists the descriptions of fields that occur in all messages. These descriptions are repeated for each Opcode in the SSI message formats section. For messages that use the *Data* field, the specific type of data is shown in that field.

Table 1-2 General Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
--------	--------	----------------	--------	------	----------

Table 1-3 Field Descriptions

Field Name	Format	Sub-Field	Meaning
Length	1 Byte	Length	Length of message not including the checksum bytes. Maximum value is 0xFF.
Opcode	1 Byte	See Table 1-1 for details.	Identifies the type of packet data being sent.
Message Source	1 Byte	0 = Scan engine	Identifies where the message is

		04 = Host	coming from.
Status	Bit 0	Retransmit	0 = First time packet is sent 1 = Subsequent transmission Attempts
	Bit 1	Reserved	Always set to zero
	Bit 2	Reserved	Always set to zero
	Bit 3	Change Type (applies to parameters)	0 = Temporary change 1 = Permanent change
	Bits 4 – 7		Unused bits must be set to 0.
Data	Variable number of bytes	See individual sections for details.	
Checksum	2 Bytes	2's complement sum of message contents excluding checksum.	Checksum of message formatted as HIGH BYTE LOW BYTE, HIGH BYTE is in front.

Note: The checksum is a 2 byte checksum and must be sent as HIGH BYTE followed by LOW BYTE.

CMD_ACK

Description: Positive acknowledgment of received packet

Table 1-4 Packet Format

Length 长度	Opcode 操作码	Message Source 消息源	Status 状态	Data 数据	Checksum 校验和
0x04	0xD0				

Table 1-5 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message(not including checksum)	1 Byte	Length Field
Opcode	0xD0	1 Byte	Identifies this Opcode type
Message Source	0 = Scan engine 4 = Host	1 Byte	Identifies where the message is coming from.
Status	Bit 0: Retransmit Bit 1-7: unused	1 Byte	Identifies the transmission status All unused bits must be set to 0
Data			None

Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message
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This message is sent to the SSI packet transmitter when the received packet passes the checksum check and no negative acknowledgment conditions apply (see CMD_NAK). If the data is in response to a command (e.g., PARAM_REQUEST, REQUEST_REVISION, etc.), no ACK is sent.

NOTE ACK/NAK handshaking can be disabled, but this is not recommended.

It is not necessary to respond to a valid ACK or NAK message.

Host Requirements

The scan engine must send a CMD_ACK or response data within the programmable Serial Response Time-out to acknowledge receipt of all messages, unless noted otherwise in the message description section. If the host sends data and does not receive a response within the programmable serial response time-out, it resends the message (with the retransmit status bit set) before declaring a failure. The host should limit the number of retries.

Scan Engine Requirements

The scan engine must send a CMD_ACK or response data within the programmable Serial Response Time-out to acknowledge receipt of all messages, unless noted otherwise in the message description section. If the scan engine does not receive an ACK within this time period, it sends the previous message again. The scan engine retries twice more (with the retransmit status bit set) before declaring a transmit error.

CMD_NAK

Description: Negative acknowledgment of received packet

Table 1-6 Packet Format

Length	Opcode	Message Source	Status	Cause	Checksum
0x05	0xD1				

Table 1-7 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum).	1 Byte	Length Field
Opcode	0xD1	1 Byte	Identifies this Opcode type.
Message Source	4 = Host 0 = Scan engine	1 Byte	Identifies where the message is coming from.
Status	Bit 0: Retransmit Bit 1-7: unused	1 Byte	Identifies the transmission status. Unused bits must be set to 0.
Cause	Reason code	1 Byte	Identifies the reason the NAK occurred: 0 = Reserved 1 = (RESEND) Checksum failure 2 = (BAD_CONTEXT) Unexpected or Unknown message 3 = Reserved 4 = Reserved 5 = Reserved

			6 = (DENIED) Host Directive Denied 7 = Reserved 8 = Reserved 9 = Reserved
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message.

This message is sent when the received packet fails the checksum verification or some error occurred while handling the message.

NOTE ACK/NAK handshaking can be disabled, but this is not recommended.

It is not necessary to respond to a valid ACK or NAK message.

Table 1-8 describes NAK types supported by the scan engine.

Table 1-8 Scan engine-Supported NAK Types

NAK Type	Meaning	Receiver Action
NAK_RESEND	Checksum incorrect.	Ensure checksum is correct. Limit number of resends. Send packet again with resend bit set.
NAK_DENIED	Host is unable to comply with the requested message (e.g., beep code is out of range).	Do not send data with this message again. Developer should check values with specified values. Developer should ensure the proper character is sent, if using wake-up character.
NAK_BAD_CONTEXT	Host does not recognize the command.	

The scan engine only resends a message twice. If the message is not sent successfully either time, the scan engine declares a transmit error and issues transmit error beeps (LO-LO-LO-LO).

Do not send data with this message again. Developer should check values with specified values. Developer should ensure the proper character is sent, if using wake-up character.

DECODE_DATA

Description: Decode data in SSI packet format

Table 1-9 Packet Format

Length	Opcode	Message Source	Status	Bar code Type	Decode Data	Checksum
	0xF3	0x00				

Table 1-10 Field Descriptions 表1-10 字段描述

Field Name	Format	Size	Description
Length	Length of message (not including checksum).	1 Byte	Length Field长度字段
Opcode	0xF3	1 Byte	Identifies this Opcode type.
Message Source	0 = Scan engine	1 Byte	Identifies where the message is coming from.
Status	Bits 1-7: unused Bit 0: Retransmit	1 Byte	Identifies the transmission status. Unused bits must be set to 0.
Bar Code Type	See Table 1-11	1 Byte	Identifies the scanned data code type.
Decode Data	<data>	Variable	Data is decoded data including prefix and suffix sent in ASCII format.
Checksum	2's complement sum of message contents excluding checksum.	2 Bytes	Checksum of message.

The scan engine uses this opcode when packeted data is selected to send decoded bar code data to the host. The decoded message is contained in the Decode Data field.

[Table 1-11](#) lists all scan engine supported code types. The associated hex value for each code (as required) is entered in the Code Type field.

Table 1-11 Supported Code Types

Code Type	Hex Value	Code Type	Hex Value
Not Applicable	0x00	EAN 13 with 5 Supps.	0x8B
Code 39	0x01	EAN 13	0x0B
Codabar	0x02	EAN 13 with 2 Supps.	0x4B
Code 128, Setup128	0x03	EAN 13 with 5 Supps.	0x8B
Discrete 2 of 5	0x04	MSI	0x0E
IATA 2 of 5	0x05	GS1-128	0x0F
Interleaved 2 of 5	0x06	UPC E1	0x10

Code 93	0x07	UPC E1 with 2 Supps.	0x50
UPC A	0x08	UPC E1 with 5 Supps.	0x90
UPC A with 2 Supps.	0x48	Trioptic Code 39	0x15
UPC A with 5 Supps.	0x88	Bookland EAN	0x16
UPC E0	0x09	Coupon Code	0x17
UPC E0 with 2 Supps.	0x49	GS1 DataBar-14	0x30
UPC E0 with 5 Supps.	0x89	GS1 DataBar Limited	0x31
EAN 8	0x0A	GS1 DataBar Expanded	0x32
EAN8 with 2 Supps	0x4A	Code11	0x0C
EAN8 with 5 Supps	0x8A	PDF417	0xF0
QR	0xF1	Data Matrix(DM)	0xF2
Aztec Code	0xF3	Maxi Code	0xF4
Veri Code	0xF5,	Han Xin	0xF7
AIM128	0xA2	ISSN	0xA3
PLESSEY	0xA4		

Host Requirements

If ACK/NAK handshaking is enabled, the host responds to each of these messages.

Scan Engine Requirements

Decode data is sent in this format if packeted decode data is selected via parameter. The host responds to this message with a CMD_ACK, if ACK/NAK handshaking is enabled.

LED_OFF

Description: De-activate LED output

Table 1-12 Packet Format

Length	Opcode	Message Source	Status	LED Selection	Checksum
0x05	0xE8	0x04		0x01	

Table 1-13 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including	1 Byte	Length field

	checksum)		
Opcode	0xE8	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status. Unused bits must be set to 0
LED Selection	Bit 0 - 7: LED bit numbers to turn off	1 Byte	Bit 0 = decode LED All other bits should be set to 0
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

The host sends this message to turn off the decode LED.

Host Requirements

None.

Scan Engine Requirements

The scan engine turns off the decode LED.

LED_ON

Description: Activate LED output

Table 1-14 Packet Format

Length	Opcode	Message Source	Status	LED Selection	Checksum
0x05	0xE7	0x04		0x01	

Table 1-15 Field Descriptions 表1-15 字段描述

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xE7	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status. Unused bits must be set to 0
LED Selection	Bit 0 - 7: LED bit numbers to turn on	1 Byte	Bit 0 = decode LED

			All other bits should be set to 0
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

The host sends this message to turn on the decode LED.

Host Requirements

None.

Scan Engine Requirements 识读引擎要求

The scan engine turns on the decode LED.

PARAM_DEFAULTS

Description: Sets the parameters to their factory default values

Table 1-16 Packet Format

Length	Opcode	Message Source	Status	Checksum
0x04	0xC8	0x04		

Table 1-17 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xC8	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

This command returns all parameters to their factory default settings.

Host Requirements

The host sends this command to reset the scan engines parameter settings to the factory default values.

Scan Engine Requirements

Upon receiving this command, the scan engine resets all its parameters to the factory default values. The behavior is the same as scanning a **Set Factory Defaults** bar code.

Recommendations

When setting parameters via SSI with the permanent flag set, the following conditions must be met:

- The system must have stable power applied to the scan engine.
- The scan engine and host must be operating and communicating with no interference.
- Power must be maintained for at least two seconds after sending the command or scanning the parameter bar code.

Failure to meet these conditions can corrupt the scan engine's memory.

PARAM_REQUEST

Description: Request values of selected parameters

Table 1-18 Packet Format

Length	Opcode	Message Source	Status	Request Data	Checksum
	0xC7	0x04			

Table 1-19 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xC7	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Request Data	<Param_num><Param_num> <Param_num>...	Variable	
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

The host uses this message to request selected parameters from the scan engine.

Host Requirements 主机要求

The host requests the scan engine's current values for specific parameters by listing the parameter numbers in the Request_Data field. If the host asks for a parameter value not supported by the scan engine, the scan engine does not send a value for this unsupported param_num. If none of the requested values is supported, the scan engine transmits an empty PARAM_SEND message. If the host requests the value of all the parameters, it sends a special param_num called ALL_PARAMS (0xFE) in the first position of the Request_Data field.

✓ **NOTE** The scan engine's response to this command is PARAM_SEND, not ACK. Depending on the time-out set, and the number of parameters requested, this reply may fall outside the programmable Serial Response Time-out. If this occurs, this is not a time-out error. To compensate, increase the time-out.

Scan Engine Requirements

When the scan engine receives this message, it processes the information by formatting a PARAM_SEND message containing all requested parameters supported and their values. The programmable Serial Response Time-out can be exceeded when processing this message, depending on the time-out set and the number of parameters requested.

Hints for requesting parameter values:

Before forming a PARAM_REQUEST, confirm that the scan engine supports the requested parameters. To find out what parameters are supported, send an 0xFE (request all parameters). The response to this is a PARAM_SEND which contains all the supported parameters and their values. 0xFE must be in the first position of the request_data field if used, or it is treated as an unsupported parameter.

Unsupported parameters are not listed in the PARAM_SEND response. Requesting unsupported parameters has no effect, but can cause delays in responding to requests for valid parameters. See [Table 1-20](#) for example requests and responses.

Table 1-20 Example Requests and Replies

PARAM_REQUEST message		Response PARAM_SEND message
#ALL	05 C7 04 00 FE FE 32	0D C6 00 00 FF 01 00 02 01 9C 07 E6 63 FC 3E
#1, 9C	06 C7 04 00 01 9C FE 92	09 C6 00 00 FF 01 00 9C 07 FD 8E
#All, 1, 9C	07 C7 04 00 FE 01 9C FD 93	0D C6 00 00 FF 01 00 02 01 9C 07 E6 63 FC 3E
#1, 9C, ALL	07 C7 04 00 01 9C FE FD 93	09 C6 00 00 FF 01 00 9C 07 FD 8E
#4	05 C7 04 00 04 FF 2C	05 C6 00 00 FF FE 36
#ALL - 3 times	07 C7 04 00 FE FE FE FC 34	0D C6 00 00 FF 01 00 02 01 9C 07 E6 63 FC 3E
#1 -3 times	07 C7 04 00 01 01 01 FF 2B	0B C6 00 00 FF 01 00 01 00 01 00 FE 2D

PARAM_SEND

Description: Respond to a PARAM_REQUEST, change particular parameter values

Table 1-21 Packet Format

Length	Opcode	Message Source	Status	Beep Code	Param data	Checksum
	0xC6					

Table 1-22 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xC6	1 Byte	Identifies this Opcode type
Message Source	0 = Scan engine 4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bits 1, 2: Unused Bit 3: Change Type Bits 4-7: Unused	1 Byte	Bit 0: 1= Retransmit Bit 3: 1 = Permanent change 0 = Temporary change - lost when power Removed Unused bits must be set to 0
Beep code		1 Byte	If no beep is required, set this field to 0xFF
Param_data	See Table 3-1		The parameter numbers and data to be sent to the requester
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

This message is sent by the scan engine in response to the PARAM_REQUEST message, or by the host to change the scan engine's parameter values.

Parameter numbers 0xF0 (+256), 0xF1 (+512), 0xF2 (+768) are used to access parameters whose numbers are 256 and higher. For example, to access the first parameter in the 256-511 range, use 0xF0 and 0x00.

Host Requirements

The host transmits this message to change the scan engine's parameters. Be sure the Change Type bit in the Status byte is set as desired. If no beep is required, the beep code must be set to 0xFF.

✓ **NOTE** Due to the processing time of interpreting and storing parameters contained in the message, the scan engine may not be able to send an ACK within the programmable Serial Response time-out. This is not an error; to compensate, increase the time-out.

Scan Engine Requirements

When the scan engine receives a PARAM_SEND, it interprets and stores the parameters, then send ACKs command (if ACK/NAK handshaking is enabled). These parameters are stored permanently only if the Change Type (bit 3 of the Status byte) is set to 1. If bit 3 is set to 0 the changes are temporary, and are lost when the scan engine is powered down.

If the PARAM_SEND is sent by the host contains a valid beep code, the scan engine issues the requested beep sequence, and changes the requested parameter values.

The scan engine issues a PARAM_SEND in response to a PARAM_REQUEST from the host. It responds to the PARAM_REQUEST message by sending all supported parameter values. No value is sent for any unsupported param_num. If none of the requested values is supported, the PARAM_SEND message is transmitted with no parameters. When sending this command, the Change Type bit (bit 3 of Status byte) can be ignored.

Recommendations

When setting parameters via SSI with the permanent flag set, the following conditions must be met:

- The system must have stable power applied to the scan engine.
- The engine and host must be operating and communicating with no interference.
- Power must be maintained for at least two seconds after sending the command or scanning the parameter bar code.

Failure to meet these conditions can corrupt the scan engine's memory.

REPLY_REVISION

Description: Reply to REQUEST_REVISION command with software revision string

Table 1-23 Packet Format

Length	Opcode	Message Source	Status	Revision	Checksum
	0xA4	0x00			

Table 1-24 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xA4	1 Byte	Identifies this Opcode type
Message Source	0 = Scan engine	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Revision	ASCII data	variable	Software revision in ASCII (see format below)
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

None.

Scan Engine Requirements

The scan engine sends its revision string to the host in the following format:

Product Name <space> Product ID <space> Hardware version <space> Firmware version
Product Name corresponds to the scan engine product name.
Product ID is the only ID of the product.
The hardware version of the scan engine, version format is 1.1.3.
The firmware version of the scan engine, version format is 1.1.3.

REQUEST_REVISION

Description: Request the software revision string from the scan engine

Table 1-25 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xA3	0x04			

Table 1-26 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xA3	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

The host sends this message to request revision information from the scan engine. The scan engine responds with [REPLY_REVISION](#).

Scan Engine Requirements

The scan engine sends its revision string to the host. See [REPLY_REVISION](#) for format.

NOTE:

Sleep Mode: Send 0x00, delay 50ms once. Then send the query command. There is still no data if waiting for 600ms,you should repeat the above process three times.

Normal Mode: Send the query command. There is still no data if waiting for 600ms,you should repeat the above process three times.

SCAN_DISABLE

Description: Prevent the scan engine from scanning bar codes

Table 1-27 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xEA	0x04			

Table 1-28 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xEA	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

All scan attempts are disabled by this command until either a SCAN_ENABLE is sent, or the scan engine is reset.

Scan Engine Requirements

When the scan engine receives this command, it ignores all trigger/START_DECODE requests until a SCAN_ENABLE command is received.

SCAN_ENABLE

Description: Permit the scan engine to scan bar codes

Table 1-29 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xE9	0x04			

Table 1-30 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xE9	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from

Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None 无
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

The host sends the SCAN_ENABLE command to enable scanning in the scan engine. Scanning is enabled upon power-up, so this command need only be sent if a prior SCAN_DISABLE command was sent.

Scan Engine Requirements

The scan engine allows scanning and decoding upon receipt of this command.

✓ **NOTE** At initial power-up, the scan engine assumes SCAN_ENABLED.

SLEEP

Description: Request to place the scan engine into Sleep power state

Table 1-31 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xEB	0x04			

Table 1-32 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xEB	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None 无
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

The host sends this command to place the scan engine into Sleep power state. If the low power mode parameter is enabled, the scan engine goes into Sleep power state automatically, and the SLEEP command is not necessary.

✓ **NOTE** The scan engine does not sleep immediately upon acknowledging the command if it is processing data when the SLEEP command is sent.

Scan Engine Requirements

None.

START_DECODE

Description: Tell scan engine to attempt to decode a bar code

Table 1-33 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xE4	0x04			

Table 1-34 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xE4	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

This command tells the scan engine to start a scan and decode session. The decode session ends with a successful decode, a scan session time-out, or a STOP_DECODE command.

Host Requirements

If the TRIGGER_MODE parameter is set to HOST, the host can use this command instead of a trigger pull.

Scan Engine Requirements

None.

STOP_DECODE

Description: Tell scan engine to abort a decode attempt

Table 1-35 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xE5	0x04			

Table 1-36 Field Descriptions

Field Name 字段名	Format 格式	Size 大小	Description 描述
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xE5	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Data			None
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

This command tells the scan engine to stop a scan and decode attempt.

Host Requirements

The TRIGGER_MODE parameter must be set to HOST.

Scan Engine Requirements

None.

WAKEUP

Description: Wakeup scan engine after it's been put into Sleep power state

If the scan engine is in Sleep power state, sending the single character, **NULL** (0x00) wakes up the scan engine. This character is only needed when hardware handshaking is not used or is bypassed. (See [Power Management](#))

Scan engine goes into sleep after 800ms no operation. Sending command in sleep mode should be recording to the below operation: Send 0x00, delay 50ms. Then send valid command.

Power Management

The scan engine has two power states (Awake and Sleep) and two power modes (Continuous Power and Low Power).

Power States

WAKEUP and SLEEP commands (see [WAKEUP](#) and [SLEEP](#)), are sent to the scan engine to set the Power state to Awake or Sleep. The Low Power mode has an automatic timer that puts the unit into the Sleep state after a specified period of time.

When the scan engine is in the Sleep power state, the PWRDWN signal (see [Table 1-37](#)) is asserted. The host uses this signal to remove power from the scan engine. Do not remove power without using this signal since the PWRDWN signal is the only indication if the scan engine is not transmitting, receiving, decoding, or writing data to non-volatile memory.

Table 1-37 Electrical Interface

Mnemonic	Pin No.	Type	Description
VCC	2	PWR	Power Supply: 3.3 VDC
GND	3	PWR	Ground
AIM/WAKE*	11	I	Wake Up: When the scan engine is in low power mode, pulsing this pin low for 200 nsec awakens the scan engine. AIM: This pin provides a hard wired trigger line that creates an AIM pattern (a spot). This spot allows positioning the bar code and laser beam alignment to maximize the scan capability of the scan engine. Aim mode is not supported on the scan engine-E100R.
FLASH_DWLD*	1	I	Flash Down Load: Do not drive high. Pull low for download.
RXD	4	I	Received Data: Serial input port.
CTS*	6	I	Clear to Send: Serial port handshaking line.
TRIG*	12	I	Trigger: Hardware triggering line. Driving this pin low causes the scan engine to start a scan and decode session.
TXD	5	O	Transmitted Data: Serial output port.
RTS*	7	O	Request to Send: Serial port handshaking line.
PWRDWN	8	O	Power Down Ready: When high, the scan engine is in low power

			mode.
BPR*	9	O	Beeper: Low current beeper output.
DLED*	10	O	Decode LED: Low current decode LED output.

Power Modes

Power modes are controlled by the Power Mode parameter (see [Power Mode](#)).

In Continuous Power mode, the scan engine remains in the Awake state after each decode attempt. The Continuous Power mode parameter (see [Power Mode](#)) sets the scan engine to remain in the Awake power state unless it receives a SLEEP command. In this mode, the scan engine can switch power states using the SLEEP and WAKEUP commands (see [SLEEP](#) and [WAKEUP](#)); automatic power state switching is not supported.

In Low Power mode, the scan engine enters into a low power consumption Sleep state whenever possible (provided all WAKEUP commands were released), drawing less current than in Continuous Power mode. This makes the Low Power mode more suitable for battery powered applications. The Low Power mode also allows the scan engine to switch power states using the SLEEP and WAKEUP commands (see [SLEEP](#) and [WAKEUP](#)). The scan engine must be awakened from the Sleep power state before performing any functions.

Host Requirements

Once the WAKEUP command is sent, the host must wait at least 10 msec, but less than 1 second before sending additional data, since the scan engine is required to wait 1 second after waking up before going back to sleep (if low power mode is enabled).

Scan Engine Requirements

The scan engine must not return to low power mode for at least 1 second after waking up.

NOTE The mechanism to wake up a scan engine in this manner also works if characters other than WAKEUP are sent to the scan engine. There is, however, no guarantee that these commands are interpreted correctly upon power-up. Therefore, it is not recommended that characters other than WAKEUP be used to awaken the scan engine.

The WAKEUP character has no effect if sent when the scan engine is awake. If the host is unsure of the scan engine power state, it can send the wakeup character anytime it wants to communicate with the scan engine.

RESET

Description: Reset scan engine

Table 1-38 Packet Format

Length	Opcode	Message Source	Status	Data	Checksum
0x04	0xFA	0x04			

Table 1-39 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xE5	1 Byte	Identifies this Opcode type
Message Source	4 = Host	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0

Data			None
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

Send 0xFA command.

Scan Engine Requirements

Which the scan engine replies ACK indicates reset.

EVENT

Description: Indicate selected events occurred

Table 1-40 Packet Format

Length	Opcode	Message Source	Status	Event Code	Checksum
0x05	0xF6	0x00			

Table 1-41 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum)	1 Byte	Length field
Opcode	0xF6	1 Byte	Identifies this Opcode type
Message Source	0 = Decoder	1 Byte	Identifies where the message is coming from
Status	Bit 0: Retransmit Bit 1-7: Unused	1 Byte	Identifies the transmission status Unused bits must be set to 0
Event Code	Type of Event Code	1 Byte	See Table 1-42
Checksum	2's complement sum of message contents excluding checksum	2 Bytes	Checksum of message

Host Requirements

The host receives this message when a selected event occurs.

Decoder Requirements

Generate this message when a selected event occurs

The command does not require the host to reply to the ACK. Specific event switch refers to Event Report

Table 1-42 Event Codes

Event Class	Event	Code Reported
Boot Up Event	Scan engine completes power on	0x01

Trigger Event	Scan engine triggers to read	0x02
---------------	------------------------------	------

2. SSI Extended Command SSI

Table 2-1 SSI Extended Command Table 2-1 SSI

Name	Type	Opcode	Description	Support
DECODE_DATA_TWO	D	0xF4	Decode data (only for 2D barcode)	Yes
CFG_PARAM_SEND	H/D	0xFC	Send configuration parameters (extended command format)	Yes
CFG_PARAM_REQUEST	H	0xFD	Request configuration parameters (extended command format)	Yes

Table 2-2 General Packet Format

Length 1	Opcode1	Length 2 High Byte	Length 2 Low byte	Opcode2	Message Source	Status	Data	High 8-bit Check	Low 8-bit Check
----------	---------	-----------------------	----------------------	---------	-------------------	--------	------	---------------------	--------------------

255 is the maximum data length that SSI command supports, so SSI extended command is needed
Description:

Length 1: Always 0xFF

Length 2: Length does not include 2 bytes of check digit

Opcode1: Opcode 1 is the same as Opcode 2

More information refers to SSI Command.

Table 2-3 Field Descriptions

Field Name	Format	Sub-Field	Meaning
Length1	1 Byte	Length1	Length1 is 0xFF

Opcode1	1 Byte	See Table 2-1 for details.	Identifies the type of packet data being sent.
Length2	2 Bytes	Packet length	Length2 has two bytes, high 8 bits in front, low 8 bits at the back.
Opcode2	1 Byte	See Table 2-1 for details.	The same as opcode1
Message Source	1 Byte	0 = Scan engine 04 = Host	Identifies where the message is coming from.
Status	Bit 0	Retransmit	0 = First time packet is sent 1 = Subsequent transmission Attempts
	Bit 1	Reserved	Always set to zero 总设置为0
	Bit 2	Reserved	Always set to zero 总设置为0
	Bit 3	Change Type (applies to parameters)	0 = Temporary change 1 = Permanent change
	Bits 4 – 7		Unused bits must be set to 0.
Data	Variable number of bytes	See individual sections for details.	
Checksum	2 Bytes	2's complement sum of message contents excluding checksum.	Checksum of message formatted as HIGH BYTE LOW BYTE, HIGH BYTE is in front.

Note: The checksum is a 2 byte checksum and must be sent as HIGH BYTE followed by LOW BYTE.

DECODE_DATA_TWO

Description: 2D barcode decoded packet format.

Table 2-4 Packet Format

Length1	Opcode1	Length2	Opcode2	Message Source	Status	Barcode Type	Decode Data	Checksum
0xFF	0xF4		0xF4	0x00				

Table 2-5 Field Descriptions

Field Name	Format	Size	Description
Length1	0xFF	1Byte	Length1 is always 0xFF

Opcode1	0xF4	1 Byte	Identifies this Opcode type.
Length2	High 8 bits, low 8 bits	2 Bytes	Length2 has two bytes, high 8 bits in front, low 8 bits at the back.
Opcode2	0xF4	1 Byte	Identifies this Opcode type.
Message Source	0 = Scan engine	1 Byte	Identifies where the message is coming from.
Status	Bit 0: Retransmit Bits 1-7: unused	1 Byte	Identifies the transmission status. Unused bits must be set to 0.
Bar Code Type	See Table 1-11	1 Byte	Identifies the scanned data code type.
Decode Data	<data>	Variable	Data is decoded data including prefix and suffix sent in ASCII format.
Checksum	2's complement sum of message contents excluding checksum.	2 Bytes	Checksum of message.

Host Requirements

If ACK/NAK handshaking is enabled, the host responds to each of these messages.

Scan Engine Requirements

Decode data is sent in this format if packeted decode data is selected via parameter. The host responds to this message with a CMD_ACK, if ACK/NAK handshaking is enabled.

3. Parameter Configuration

Default setting code of special mark symbol is corresponding to different default configuration. No special mark symbol depends on default setting code with * symbol (except factory default configuration):

- * : default configuration 1
- # : default configuration 2
- % : default configuration 3
- & : default configuration 4

Table 3-3

Parameter Name	扫 Scanning Head			Note
	Parameter Values	Set Range	Default Values	
Default Configuration 默认配置	0xF2 0xFF	0: Factory Configuration 1: Default Configuration 1	0(Factory Configuration)	

		2: Default Configuration 2 3: Default Configuration 3 4: Default Configuration 4 5: Default Configuration 5		
Duration in Scanning	0x88	10~250(unit: 0.1s)	3.0 sec.	
Power Mode	0x80	0x00:Continuous Power 0x01:Low Power	0x01:Low Power	
Trigger Mode	0x8A	0x00:Level 0x02:Pulse 0x04:Continuous 0x08:Host 0x09: Automatic induction Mode 0x0A: Button Continuous	0x00:Level	
Interval Time	0x89	0~9.9s (unit: 0.1s)	0.5s	
Beeper Volume	0x8C	0x02: Low 0x01: Medium 0x00: High	0x00: High	
Beep After Good Decode	0x38	0:Disable 1:Enable	1 (Enable)	
Terminator	0xF2 0x05	0x00: Disable 0x01: CR LF 0x02: CR 0x03: TAB	*0x00: Disable #0x01: CR LF &0x01: CR LF %CR	

		0x04: CR CR 0x05: CR LF CR LF		
Indicator Light Function	0xF2 0x0A	0x00: Good Decode 0x01: Power LED	0x00: Good Decode	
LED After Good Decode	0xF2 0x0B	0:Disable 1:Enable	1 (Enable)	
Mute	0xF2 0x0C	0:Disable 1:Enable	0(Disable)	
Boot Prompt	0xF2 0x0D	0:Disable 1:Enable	1 (Enable)	
Setup Code Prompt	0xF2 0x0E	0:Disable 1:Enable	1 (Enable)	
Transmit "No Read" Message	0x5E	0x01:Enable No Read 0x00:Disable No Read	0x00:Disable No Read	
Parameter Scanning	0xEC	0:Disable 1:Enable	1(Enable)	
Send Setting Code	0xF1 0x71	0:Disable 1:Enable	0(Disable)	
Linear Code Type Security Levels	0x4E	0x01:Linear Security Level 1 0x02:Linear Security Level 2 0x03:Linear Security Level 3	0x01:Linear Security Level 1	

		0x04:Linear Security Level 4		
Automatic Filling of Value-added Tax Invoice	0xF2 0x08	0:Disable 1:Enable	0(Disable)	
Invoice Type	0xF2 0xAA	0:Special Invoice 1:Plain Invoice	0:Special Invoice	
Transmit ID Characters	0x2D	0:None 1:AIM code ID 2:User Defined ID	0(None)	
The prefix/suffix value				
Prefix				
Suffix1	0x69	0x00~0x7F	0x00	
Suffix2	0x68	0x00~0x7F	0x0A	
	0x6A	0x00~0x7F	0x0D	
Scan Data Transmition	0xEB	0x00:Data Only 0x01:Data+Suffix1 0x02:Data+Suffix2 0x03:Data+Suf1+Suf2 0x04:Prefix+Data 0x05:Prefix+Data+Suf1 0x06:Prefix+Data+Suf2 0x07:Prefix+Data+Suf1+Suf2 0x03:数据+后缀 1+后缀 2	0x00(Data Only)	
Baud Rate	0x9C	0x03:1200 0x04:2400	0x06:9600	

		0x05:4800 0x06:9600 0x07:19200 0x08:38400 0x09:57600 0x0A:115200		
Parity	0x9E	0x00:Odd 0x01:Even 0x02:Mark 0x03:Space 0x04:None	0x04:None	
Software Handshaking	0x9F	0:Disable 1:Enable	1(Enable)	
Decode Data Packet Format	0xEE	0:Disable 1:Enable	0(Disable)	
Host Serial Response Time-out	0x9B	0.0~9.9	2(s)	
Stop Bit Select	0x9D	0x01:1 Stop Bit 0x02:2 Stop Bits	0x01(1 Stop Bit)	
Intercharacter Delay	0x6E	0~ 99 msec	0	
Host Character Time-out	0xEF	0.01~0.99S	200ms	
Communication Mode	0xF2 0x01	0: Serial Port 1:USB KBW USB 2:USB Serial Port USB	0(Serial Port)	1D product does not support USB KBW and USB serial

		3: AUTO UK 4: AUTO UV 5: Wiegand 6: RS485 7: AUTO UW 8: AUTO UR 9: PS2 A: TTDATA B: TTDATA+Serial Port		port
Wiegand protocol type	0xF2 0xA4	0: AUTO 1: WG26 2: WG34 3: WG66	0: AUTO	
Wiegand 26 Protocol Output Mode	0xF2 0xA5	0: 3+5 1: Raw Data	0: 3+5	
PS2 Mode	0xF2 0xA6	0: AUTO 1: Independent PS2 独立 PS2		
Floodlight Control	0xF2 0x02	0: Lighting when Read 1: Always Lighting 2: Always Close	0(Lighting when Read)	
Positioning Light Control	0xF2 0x03	0: Lighting when Read 1: Always Lighting 2: Always Close	0(Lighting when Read)	Only for 2D
Sensitivity Level	0xF2 0x04	1: High Sensitivity 2: Medium Sensitivity 3: Low Sensitivity	1(High Sensitivity)	High Sensitivity:1 Medium Sensitivity:8 Low Sensitivity:15 Sensitivity values

				inquire the parameter values returned.
Custom Sensitivity	0xF3 0x01	1~15(unit:1)	1	
Stability of Induction Time	0xF3 0x02	0~9.9s(unit:0.1)	0.5s	
Output Interval of The Same Code	0xF3 0x03	0~9.9s (unit:0.1s)	0.5s	
1D Identifies Two Barcodes	0xF2 0x10	0:Disable 1:Enable	0(Disable)	
Output Product Information	0xF4 0x01	None	None	
Output Character Set Type	0xF2 0x06	0: Primitive Type 1: GBK(GB2312) 2: UNICODE :	1:GBK(GB2312)	
Input Character Set Type	0xF2 0xAB	0: AUTO 1: GBK(GB2312) 2: UTF8 3: ASCII	0: AUTO	
USB Type	0xF2 0x0F	0: USB1.1(Full Speed) USB1.1 1: USB2.0(High Speed) USB2.0	0: USB1.1(Full Speed)	
Country/Language Keyboard	0xF6 0x01	1: American Keyboard 2: Belgium 6: Denmark 7: Finland	1: American Keyboard	

		8: France 9: Austria、Germany D: Italy 10: Norway 12: Portugal 14: Russia 16: Spain 17: Sweden 19: Turkey_F 1A: Turkey_Q 1B: England 1C: Japan		
Time interval that keyboard outputs character	0xF3 0x04	range: 0-1000ms unit: 5ms default: 5ms	5ms	
Quick Settings of Keyboard Output Time Interval	0xF2 0xB2	0: 0ms 1: 10ms 2: 50ms		
Letter case conversion	0xF2 0xA1	0: Normal Letter Case 1: All Uppercase 2: All Lowercase 3: Case Inversion	0: Normal Letter Case	
Output Ctrl Combination Key	0xF2 0xAD	0: Disable 1: Enable	0: Disable	
Keyboard Type	0xF2 0xB4	0: Standard Keyboard 1: Virtual Keyboard	0: Standard Keyboard	

Boot Event	0xF2 0xA2	0: Disable 1: Enable	0: Disable	
Trigger Event	0xF2 0xA3	0: Disable 1: Eable Event 2: Eable GPIO Pin Event 3: Enable Event&GPIO Pin Event	0: Disable	
Enable Setting Code Password Mode	0xF2 0xA7	0: Disable 1: Enable	0: Disable	
Input Setting Code Password	0xF3 0x05			
Modify Setting Code Password	0xF3 0x06			
Logout Password	0xF2 0xA9			
Disable passive trigger scanning	0xF2 0xA8	0: Disable 1: Enable	0: Disable	
1D Global Switch	0xF2 0x11	0: Disable 1: Enable		
2D Global Switch	0xF2 0x50	0: Disable 1: Enable		
All Barcode Switch	0xF2 0x90	0: Disable 1: Enable		
About 1D Barcode(only for 1D)				
UPC-A	0x01	0:Disable 1:Enable	1(Enable)	

UPC-E	0x02	0:Disable 1:Enable	1(Enable)	
EAN-8	0x04	0:Disable 1:Enable	1(Enable)	
EAN-13	0x03	0:Disable 1:Enable	1(Enable)	
Bookland EAN(ISBN)	0x53	0:Disable 1:Enable	0(Disable)	
Decode UPC/EAN Supplementals	0x10	0x00: Don't Decode Supplementals 0x01:Decode Supplementals 0x02:Auto Decode Supplementals	0: Don't Decode Supplementals	
Transmit UPC-A Check Digit	0x28	0:Disable 1:Enable	1(Enable)	
Transmit UPC-E Check Digit	0x29	0:Disable 1:Enable	1(Enable)	
UPC-A Preamble	0x22	0x00:No Preamble 0x01:System Character 0x02:System Character&Country Code	0x01:System Character	
UPC-E Preamble	0x23	0x00:No Preamble 0x01:System Character 0x02:System	0x01:System Character	

		Character&Country Code		
Convert UPC-E to A	0x25	0:Disable 1:Enable	0(Disable)	
EAN-8 Zero Extend (EAN-8 is expanded to EAN-13)	0x27	0:Disable 1:Enable	0(Disable)	
Bookland ISBN Format	0xF1 0x40	0:ISBN-10 1:ISBN-13	0:ISBN-10	
Bookland ISBN UPC/EAN Security Level	0x4D	0x00:Level 0 0x01:Level 1 0x02:Level 2 0x03:Level 3 0x00:级别 0 0x01:级别 1 0x02:级别 2 0x03:级别 3	0x00:Level 0	
Code 128 Symbolologies Switch	0x08	0:Disable 1:Enable	1(Enable)	
GS1-128 (formerly UCC/EAN-128)	0x0E	0:Disable 1:Enable	1(Enable)	
ISBT 128	0x54	0:Disable 1:Enable	1(Enable)	
Lengths for Code 128				None

Enable Code 39 Barcode Scanning	0x00	0:Disable 1:Enable	1(Enable)	
Set Lengths for Code 39	0x12(L1) 0x13(L2)	0~99 0~99	2 55	
Code 39 Check Digit Verification	0x30	0:Disable 1:Enable	0(Disable)	
Transmit Code 39 Check Digit	0x2B	0:Disable 1:Enable	0(Disable)	
Code 39 Full ASCII	0x11	0:Disable 1:Enable	0(Disable)	
Code 39 Transport Start Character and Terminator Code 39	0xF2 0x30	0:Disable 1:Enable	0(Disable)	
Convert Code 39 to Code 32 (Italian Pharma Code)	0x56	0:Disable 1:Enable	0(Disable)	
Code 32 Prefix	0xE7	0:Disable 1:Enable	0(Disable)	
Enable Code 93	0x09	0:Disable 1:Enable	0(Disable)	
Set Lengths for Code 93	0x1A(L1) 0x1B(L2)	0~99 0~99	4 55	
Code 93 长度设置				
Enable Code 11 Barcode Scanning	0x0A	0:Disable 1:Enable	0(Disable)	

Set Lengths for Code 11	0x1C(L1)	0~99	4	
	0x1D(L2)	0~99	55	
Code 11 Check Digit Verification	0x34	0:Disable 1:One check digit 2:Two check digit	0(Disable)	
Transmit Code 11 Check Digit	0x2F	0:Disable 1:Enable	0(Disable)	
Enable Interleaved 2 of 5/ITF/	0x06	0:Disable 1:Enable	1(Enable)	
Set Scanning Data Lengths for Interleaved 2 of 5	0x16	0~99	14	
	0x17	0~99	14	
Interleaved 2 of 5 Check Digit Verification	0x31	0:Disable 1:USS Check Digit 2:OPCC Check Digit	0(Disable)	Now Support: 0:Disable 1:USS Check Digit
Transmit Interleaved 2 of 5 Check Digit	0x2C	0:Disable 1:Enable	0(Disable)	
Convert I 2 of 5 to EAN-13	0x52	0:Disable 1:Enable	0(Disable)	
Enable Discrete 2 of 5 /Industrial 2 of 5/IND25/	0x05	0:Disable 1:Enable	0(Disable)	

Set Scanning Data Lengths for Discrete 2 of 5	0x14	0~99	12	
	0x15	0~99		
Matrix 25	0xF2 0x20	0:Disable 1:Enable	0(Disable)	
Matrix 25 Check Digit Verification	0xF2 0x21	0:Disable 1:Enable	0(Disable)	
Transmit Matrix 25 Check Character	0xF2 0x22	0:Disable 1:Enable	0(Disable)	
Set Lengths for Matrix 25	L1=0xF5 0x00, L2=0xF5 0x01	0~99 0~99	12	
Standard 25/IATA 25	0xF2 0x23	0:Disable 1:Enable	0(Disable)	
Standard 25 Check Digit Verification	0xF2 0x24	0:Disable 1:Enable	0(Disable)	
Transmit Standard 25 Check Character	0xF2 0x25	0:Disable 1:Enable	0(Disable)	
Set Lengths for Standard 25	L1=0xF5 0x02, L2=0xF5 0x03	0~99 0~99	12	
Enable Codabar Barcode Scanning	0x07	0:Disable	0(Disable)	

		1:Enable		
Set Lengths for Codabar	0x18(L1)	0~99	5	
	0x19(L2)	0~99	55	
NOTIS Transmit Format	0x37	0:Disable 1:Enable	0(Disable)	
Start Character and Terminator	0xF2 0x31	0: ABCD/ABCD 1: ABCD/TN*E	0: ABCD/ABCD	
Letter Case Setting of Start Character and Terminator	0xF2 0x32	0: Uppercase 1: Lowercase	0: Uppercase	
Enable MSI /MSI PLESSEY Barcode Scanning	0x0B	0:Disable 1:Enable	0(Disable)	
Set Lengths for MSI	0x1E(L1)	0~99	6	
	0x1F(L2)	0~99	55	
MSI Check Digit	0x32	0:One digit 1:Two digit	0(One digit)	
Transmit MSI Check Digit	0x2E	0:Disable 1:Enable	0(Disable)	
MSI Check Digit Algorithm	0x33	0:Mod10/Mod11 1:Mod10/Mod10	1(Mod 10/Mod 10)	
Enable GS1 DataBar(RSS) 14 Barcode Scanning	0xF0 0x52	0:Disable 1:Enable	0(Disable)	
Enable GS1 DataBar Limited Barcode Scanning	0xF0 0x53	0:Disable 1:Enable	0(Disable)	

Enable GS1 DataBar Expanded Barcode Scanning	0xF0 0x54	0:Disable 1:Enable	0(Disable)	
About 2D Barcode(only for 2D)				
PDF417				
PDF417 (100 017X)	0x0F	0:Disable 1:Enable	1(Enable)	
Read Multi-code	0xF2 0x60	0: Read Monocode 1: Read Dicode 2: Read Monocode /Dicode	0: Read Monocode	
Read Normal Phase/ Phase Reversal	0xF2 0x61	0: Read Normal Phase 1: Read Phase Reversal 2: Read Normal Phase/ Phase Reversal	0: Read Normal Phase	
QRCode				
QRCode (100 325X)	F0h 25h	0:Disable 1:Enable	1(Enable)	
Read Multi-code	0xF2 0x65	0: Read Monocode 1: Read Dicode 2: Read Monocode /Dicode	0: Read Monocode	
ECI Control ECI 控制	0xF2 0x66	0: Not Output ECI *ECI 1: Output ECI ECI	0: Not Output ECI ECI	
DataMatrix				
DataMatrix (100 324X)	F0h 24h	0:Disable 1:Enable	1(Enable)	
Read Multi-code	0xF2 0x6A	0: Read Monocode 1: Read Dicode 2: Read Monocode /Dicode	0: Read Monocode	
Read Normal Phase/ Phase Reversal	0xF2 0x6B	0: Read Normal Phase	0: Read Normal	

		1: Read Phase Reversal	Phase	
		2: Read Normal Phase/ Phase Reversal		
ECI Control ECI	0xF2 0x6C	0: Not Output ECI *ECI	0: Not Output ECI ECI	
		1: Output ECI ECI		
MaxiCode				
MaxiCode	F0h 26h	0:Disable	0(Disable)	
(100 326X)		1:Enable		
Aztec				
Aztec	F0h 28h	0:Disable	0(Disable)	
(100 328X)		1:Enable		
Han Xin Code				
Han Xin Code	F0h 2Fh	0:Disable	0(Disable)	
(100 32FX)		1:Enable		
Read Multi-code	0xF2 0x70	0: Read Monocode	0: Read Monocode	
		1: Read Dicode		
		2: Read Monocode /Dicode		
Read Normal Phase/ Phase Reversal	0xF2 0x71	0: Read Normal Phase	0: Read Normal Phase	
		1: Read Phase Reversal		
		2: Read Normal Phase/ Phase Reversal		
ISSN	0xF2 0x33	0:Disable	0(Disable)	
		1:Enable		
PLESSEY	0xF2 0x34	0:Disable	0(Disable)	
		1:Enable		

4. Param Data Format

Table 4-1 Param Data Format

Parameter NO.	Data Format
---------------	-------------

0 through 0xEF	<param_num> <value>
0xF0, 0xF1, 0xF2	<extended parameter code> <param_num offset> <value>
0xF4	<WORD parameter><Parameter Number><Value : High Byte><Value : Low Byte> Or <WORD parameter><Extended parameter code><Parameter Number> <Value : High Byte><Value : Low Byte>

Numeric Bar Codes

For parameters requiring specific numeric values, scan the appropriately numbered bar code(s).





取消条形码
改变选择或取消一个不正确的输入,扫描下面的条形码。



Setting Code Lengths Via Serial Commands

There are two lengths (L1 and L2) for each variable length code type.
Depending on the selected option, the scan engine decodes:
One discrete length bar code;
Two discrete length bar codes;
Bar codes within a range of lengths within the scan engine capability;
Any length of bar codes within the scan engine capability.

Table 4-2 lists the requirements for each option.

Table 4-1 Setting Variable Code Lengths

Code Length Option	L1 value L1	L2 value L2
--------------------	-------------	-------------

One discrete length is decoded.	Discrete length to decode	0x00
Two discrete lengths is decoded.	Higher length value	Lower length value
Lengths within a range are decoded within the scan engine capability.	Lower length value	Higher length value
Any length bar code is decoded within the scan engine capability.	0x00	0x00

Setting Prefixes and Suffixes Via Serial Commands

To append a prefix and suffixes to the decode data:

- 1、Set the Scan Data Transmission Format (parameter 0xE2) to the desired option.
- 2、Enter the required value(s) for Prefix (0x69), Suffix1 (0x68) or Suffix2 (0x6A) using the hex values for the desired ASCII value from [Table 4-3](#)

Table 4-2 Character Equivalents

Scan Value	Hex Value	Keyboard Function Key	Keyboard Ctrl Combination Key
1000	00h	Null	CTRL 2
1001	01h	Keypad Enter	CTRL A
1002	02h	Caps lock	CTRL B
1003	03h	Right Arrow	CTRL C
1004	04h	Up Arrow	CTRL D
1005	05h	Null	CTRL E
1006	06h	Null	CTRL F
1007	07h	Enter	CTRL G
1008	08h	Left Arrow	CTRL H
1009	09h	Horizontal Tab	CTRL I
1010	0Ah	Down Arrow	CTRL J
1011	0Bh	Vertical Tab	CTRL K
1012	0Ch	Backspace	CTRL L

1013	0Dh	Enter	CTRL M
1014	0Eh	Insert	CTRL N
1015	0Fh	Esc	CTRL O
1016	10h	F11	CTRL P
1017	11h	Home	CTRL Q
1018	12h	Print Screen	CTRL R
1019	13h	Delete	CTRL S
1020	14h	tab+shift	CTRL T
1021	15h	F12	CTRL U
1022	16h	F1	CTRL V
1023	17h	F2	CTRL W
1024	18h	F3	CTRL X

Table 4-3 Character Equivalents (Continued)

Scan Value	Hex Value	Keyboard Function Key	Keyboard Ctrl Combination Key
1025	19h	F4	CTRL Y
1026	1Ah	F5	CTRL Z
1027	1Bh	F6	CTRL [
1028	1Ch	F7	CTRL \
1029	1Dh	F8	CTRL]
1030	1Eh	F9	CTRL 6
1031	1Fh	F10	CTRL -
1032	20h	Space	Space
1033	21h	/A	!
1034	22h	/B	'
1035	23h	/C	#
1036	24h	/D	\$
1037	25h	/E	%
1038	26h	/F	&

1039	27h	/G	‘
1040	28h	/H	(
1041	29h	/I	)
1042	2Ah	/J	*
1043	2Bh	/K	+
1044	2Ch	/L	,
1045	2Dh	-	-
1046	2Eh	.	.
1047	2Fh	/	/
1048	30h	0	0
1049	31h	1	1
1050	32h	2	2
1051	33h	3	3
1052	34h	4	4
1053	35h	5	5
1054	36h	6	6
1055	37h	7	7

Table 4-3 Character Equivalents (Continued) 表

Scan Valu	Hex Value	Keyboard Function Key	Keyboard Ctrl Combination Key
105 6	38h	8	8
105 7	39h	9	9
105 8	3Ah	/Z	:
105 9	3Bh	%F	;
106 0	3Ch	%G	<
106 1	3Dh	%H	=
106 2	3Eh	%I	>
106 3	3Fh	%J	?
106 4	40h	%V	@
106 5	41h	A	A
106 6	42h	B	B
106 7	43h	C	C
106 8	44h	D	D
106 9	45h	E	E
107 0	46h	F	F
107 1	47h	G	G
107 2	48h	H	H
107 3	49h	I	I
107 4	4Ah	J	J
107 5	4Bh	K	K
107 6	4Ch	L	L
107	4Dh	M	M

7			
107 8	4Eh	N	N
107 9	4Fh	O	O
108 0	50h	P	P
108 1	51h	Q	Q
108 2	52h	R	R
108 3	53h	S	S
108 4	54h	T	T
108 5	55h	U	U
108 6	56h	V	V

Table 4-3 Character Equivalents (Continued)

Scan Value	Hex Value	Keyboard Function Key	Keyboard Ctrl Combination Key
1087	57h	W	W
1088	58h	X	X
1089	59h	Y	Y
1090	5Ah	Z	Z
1091	5Bh	%K	[
1092	5Ch	%L	\
1093	5Dh	%M	]
1094	5Eh	%N	^
1095	5Fh	%O	_
1096	60h	%W	'
1097	61h	+A	a
1098	62h	+B	b
1099	63h	+C	c
1100	64h	+D	d
1101	65h	+E	e
1102	66h	+F	f

1103	67h	+G	g
1104	68h	+H	h
1105	69h	+I	i
1106	6Ah	+J	j
1107	6Bh	+K	k
1108	6Ch	+L	l
1109	6Dh	+M	m
1110	6Eh	+N	n
1111	6Fh	+O	o
1112	70h	+P	p
1113	71h	+Q	q
1114	72h	+R	r
1115	73h	+S	s
1116	74h	+T	t
1117	75h	+U	u

Table 4-3 Character Equivalents (Continued)

Scan Value	Hex Value	Keyboard Function Key	Keyboard Ctrl Combination Key
1118	76h	+V	v
1119	77h	+W	w
1120	78h	+X	x
1121	79h	+Y	y
1122	7Ah	+Z	z
1123	7Bh	%P	{
1124	7Ch	%Q	
1125	7Dh	%R	}
1126	7Eh	%S	~
1127	7Fh		Undefined

Values from 1128 through 1255 (hex values 80h through FFh for SSI) may also be set

AIM Code Identifiers AIM

Table 4-3

Barcode Type	AIM ID	Instruction
Code 128	JC0	Common data
GS1-128(UCC/EAN-128)	JC1	FNC1 in the first code word position.
AIM 128	JC2	FNC1 in the second code word position.
ISBT-128	JC0	
EAN8	JE4	Common data
	JE4...JE1...	Add 2-bit additional code EAN-8
	JE4...JE2...	Add 5-bit additional code EAN-8
EAN13	JE0	Common data
	JE3	Add 2/5-bit additional code EAN-13。
ISSN	JX0	Common data
ISBN/Bookland EAN	JX0	Common data
UPC-E	JE0	Common data
	JE3	Add 2/5-bit additional code UPC-E
UPC-A	JE0	Common data
	JE3	Add 2/5-bit additional code UPC-A
Interleaved 2 of 5/ITF	Jl0	Common data
	Jl1	Check and output check character
	Jl3	Check but don't output check character
ITF-14	Jl1	Output check character
	Jl3	Not output check character
Deutsche Post 14	JX0	Common data
Deutsche Post 12	JX0	Common data
NEC-25(COOP 2 of 5)	JX0	Common data
Matrix 2 of 5	JX0	Common data
Industrial 2 of 5/ Discrete 2 of 5/IND25	JS0	Common data

Standard 2 of 5 (IATA 25)	JR0	Common data
Code 39	JA0	Common data 。
	JA1	MOD43 Check and output check character
	JA3	MOD43 Check but don't output check character
	JA4	Full ASCII expand,but don't check.
	JA5	Full ASCII expand,and output check character
	JA7	Full ASCII expand,but don't output check character
Code 93	JG0	Common data
Codabar	JF0	Common data
	JF2	Check and output check character
	JF4	Check but don't output check character
Code 11	JH3	Common data
	JH0	MOD11 single character check, and output check character. MOD11
	JH3	MOD11 single character check, but don't output check character.
Plessey	JP0	Common data
MSI-Plessey	JM0	Common data
	JM0	MOD10 check and output check character
	JM1	MOD10 check but don't output check character
GS1-DataBar (RSS)	Je0	Standard data packet
PDF417	JL0	No options specified at this time. Always transmit 3.
QR	JQ0	QR barcode Mode1 (conform AIM ISS 97-001)
	JQ1	QR barcode Mode2 (2005 symbol),do not use the ECI protocol
	JQ2	QR barcode Mode2(2005 symbol), Use the ECI protocol
	JQ3	QR barcode Mode2 (2005 symbol),do not use the ECI protocol, FNC1 is in the first place
	JQ4	QR barcode Mode2 (2005 symbol),use the ECI protocol , FNC1 is in the first place
	JQ5	QR barcode Mode2 (2005 symbol),do not use the ECI protocol , FNC1 is in the second place

	]Q6	QR barcode Mode2 (2005 symbol),use the ECI protocol , FNC1 is in the second place
AZTEC(Aztec Code)	]z0	No options specified at this time. Always transmit 3.
DM(DataMatrix)	]d0	ECC 000 - 140
	]d1	ECC 200
	]d2	ECC 200,FNC1 is in the first or fifth place
	]d3	ECC 200, FNC1 is in the second or sixth place
	]d4	ECC 200 supports ECI protocol
	]d5	ECC 200, FNC1 is in the first or fifth place and supports ECI protocol
	]d6	ECC 200, FNC1 is in the second or sixth place and supports ECI protocol
MaxiCode	]U1	No options specified at this time. Always transmit 3.
汉信码/Han Xin Code	]X0	No options specified at this time. Always transmit 3.

Parameter Command

Table 4-4 表4-5

Name 名称	Command
CMD_ACK	04 D0 04 00 FF 28
CMD_NAK	RESEND:05 D1 04 00 01 FF 25 BAD_CONTEXT:05 D1 04 00 02 FF 24 DENIED:05 D1 04 00 06 FF 20
DECODE_DATA	None 无
LED_OFF	05 E8 04 00 01 FF 0E
LED_ON	05 E7 04 00 01 FF 0F
PARAM_DEFAULTS	04 C8 04 00 FF 30
PARAM_REQUEST	Listed in the following table 如下表所列
PARAM_SEND	Listed in the following table 如下表所列
REQUEST_REVISION	04 A3 04 00 FF 55
REPLY_REVISION	None 无
SCAN_DISABLE	04 EA 04 00 FF 0E
SCAN_ENABLE	04 E9 04 00 FF 0F
SLEEP	04 EB 04 00 FF 0D
START_DECODE	04 E4 04 00 FF 14
STOP_DECODE	04 E5 04 00 FF 13
WAKEUP	None 无

RESET	04 FA 04 00 FE FE
Custom Beeper Sound	05 E6 04 00 00 FF 11 05 E6 04 00 01 FF 10

Table 4-5

Parameter Name	Command	Command Inquiry
Default Configuration 默认配置	Factory Configuration:08 C6 04 08 00 F2 FF 00 FD 35 Default Configuration 11:08 C6 04 08 00 F2 FF 01 FD 34 Default Configuration 22:08 C6 04 08 00 F2 FF 02 FD 33 Default Configuration 33:08 C6 04 08 00 F2 FF 03 FD 32 Default Configuration 44:08 C6 04 08 00 F2 FF 04 FD 31 Default Configuration 55:08 C6 04 08 00 F2 FF 05 FD 30	06 C7 04 00 F2 FF FD 3E
Duration in Scanning	4s: 07 C6 04 08 00 88 28 FE 77 10s:07 C6 04 08 00 88 64 FE 3B Temporary: 1s: 07 C6 04 00 FF 88 0A FD 9E	05 C7 04 00 88 FE A8
Power Mode	Continuous Power: 07 C6 04 08 00 80 00 FE A7 Low Power: 07 C6 04 08 00 80 01 FE A6	05 C7 04 00 80 FE B0
Trigger Mode	Level: 07 C6 04 08 00 8A 00 FE 9D Pulse: 07 C6 04 08 00 8A 02 FE 9B Continuous: 07 C6 04 08 00 8A 04 FE 99 Host: 07 C6 04 08 00 8A 08 FE 95 Automatic Induction Mode: 07 C6 04 08 00 8A 09 FE 94 Button Continuous: 07 C6 04 08 00 8A 0A FE 93 Temporary: Level: 07 C6 04 00 FF 8A 00 FD A6 Continuous: 07 C6 04 00 FF 8A 04 FD A2 Host: 07 C6 04 00 FF 8A 08 FD 9E Host:07 C6 04 00 00 8A 08 FE 9D	05 C7 04 00 8A FE A6
Interval Time	0s:07 C6 04 08 00 89 00 FE 9E 0.5s: 07 C6 04 08 00 89 05 FE 99 3s: 07 C6 04 08 00 89 1E FE 80	05 C7 04 00 89 FE A7
Beeper Volume	Low: 07 C6 04 08 00 8C 02 FE 99 Medium : 07 C6 04 08 00 8C 01 FE 9A	05 C7 04 00 8C FE A4

	High: 07 C6 04 08 00 8C 00 FE 9B	
Beep After Good Decode	Enable: 07 C6 04 08 00 38 01 FE EE Disable: 07 C6 04 08 00 38 00 FE EF	05 C7 04 00 38 FE F8
Terminator	Disable: 08 C6 04 08 00 F2 05 00 FE 2F CR LF: 08 C6 04 08 00 F2 05 01 FE 2E CR: 08 C6 04 08 00 F2 05 02 FE 2D TAB: 08 C6 04 08 00 F2 05 03 FE 2C CR CR : 08 C6 04 08 00 F2 05 04 FE 2B CR LF CR LF : 08 C6 04 08 00 F2 05 05 FE 2A	06 C7 04 00 F2 05 FE 38
Indicator Light Function	Good Decode: 08 C6 04 08 00 F2 0A 00 FE 2A Power LED: 08 C6 04 08 00 F2 0A 01 FE 29	06 C7 04 00 F2 0A FE 33
LED After Good Decode	Disable: 08 C6 04 08 00 F2 0B 00 FE 29 Enable: 08 C6 04 08 00 F2 0B 01 FE 28	06 C7 04 00 F2 0B FE 32
Mute	Disable: 08 C6 04 08 00 F2 0C 00 FE 28 Enable: 08 C6 04 08 00 F2 0C 01 FE 27	06 C7 04 00 F2 0C FE 31
Boot Prompt	Disable: 08 C6 04 08 00 F2 0D 00 FE 27 Enable: 08 C6 04 08 00 F2 0D 01 FE 26	06 C7 04 00 F2 0D FE 30
Setup Code Prompt	Disable: 08 C6 04 08 00 F2 0E 00 FE 26 Enable: 08 C6 04 08 00 F2 0E 01 FE 25	06 C7 04 00 F2 0E FE 2F
Transmit "No Read" Message	Enable: 07 C6 04 08 00 5E 01 FE C8 Disable: 07 C6 04 08 00 5E 00 FE C9	05 C7 04 00 5E FE D2
Parameter Scanning	Enable: 07 C6 04 08 00 EC 01 FE 3A Disable: 07 C6 04 08 00 EC 00 FE 3B	05 C7 04 00 EC FE 44
Send Setting Code	Enable: 08 C6 04 08 00 F1 71 01 FD C3 Disable: 08 C6 04 08 00 F1 71 00 FD C4	06 C7 04 00 F1 71 FD CD
Linear Code Type Security Levels	Level 1: 07 C6 04 08 00 4E 01 FE D8 Level 2: 07 C6 04 08 00 4E 02 FE D7 Level 3: 07 C6 04 08 00 4E 03 FE D6 Level 4: 07 C6 04 08 00 4E 04 FE D5	05 C7 04 00 4E FE E2
Automatic Filling of Value-added Tax Invoice	Disable: 08 C6 04 08 00 F2 08 00 FE 2C Enable: 08 C6 04 08 00 F2 08 01 FE 2B	06 C7 04 00 F2 08 FE 35
Invoice Type	Special Invoice: 08 C6 04 08 00 F2 AA 00 FD 8A Plain Invoice: 08 C6 04 08 00 F2 AA 01 FD 89	06 C7 04 00 F2 AA FD 93
Transmit ID Characters	Disable : 07 C6 04 08 00 2D 00 FE FA AIM: 07 C6 04 08 00 2D 01 FE F9 Custom: 07 C6 04 08 00 2D 02 FE F8	05 C7 04 00 2D FF 03
The prefix/suffix value	Prefix Character String Setting 31 Suffix Character String Setting 32 33: 0B C6 04 08 00 69 31 68 32 6A 33 FD 52 Prefix 0x00 Suffix 0x0D 0x0A : 0B C6 04 08 00 69 00 68 0D 6A 0A FD D1	07 C7 04 00 69 68 6A FD F3

Suffix2		
Scan Data Transmission	Data : 07 C6 04 08 00 EB 00 FE 3C Data+Suffix1 1: 07 C6 04 08 00 EB 01 FE 3B Data+Suffix2: 07 C6 04 08 00 EB 02 FE 3A Data+Suffix1+Suffix2: 07 C6 04 08 00 EB 03 FE 39 Prefix+Data: 07 C6 04 08 00 EB 04 FE 38 Prefix+Data+Suffix1: 07 C6 04 08 00 EB 05 FE 37 Prefix+Data+Suffix2: 07 C6 04 08 00 EB 06 FE 36 Prefix+Data+Suffix1+Suffix2: 07 C6 04 08 00 EB 07 FE 35	05 C7 04 00 EB FE 45
Baud Rate	1200: 07 C6 04 08 00 9C 03 FE 88 2400: 07 C6 04 08 00 9C 04 FE 87 4800: 07 C6 04 08 00 9C 05 FE 86 9600: 07 C6 04 08 00 9C 06 FE 85 19200: 07 C6 04 08 00 9C 07 FE 84 38400: 07 C6 04 08 00 9C 08 FE 83 57600: 07 C6 04 08 00 9C 09 FE 82 115200: 07 C6 04 08 00 9C 0A FE 81	05 C7 04 00 9C FE 94
Parity	Odd: 07 C6 04 08 00 9E 00 FE 89 Even: 07 C6 04 08 00 9E 01 FE 88 Mark: 07 C6 04 08 00 9E 02 FE 87 Space: 07 C6 04 08 00 9E 03 FE 86 None: 07 C6 04 08 00 9E 04 FE 85	05 C7 04 00 9E FE 92
Software Handshaking	Enable: 07 C6 04 08 00 9F 01 FE 87 Disable: 07 C6 04 08 00 9F 00 FE 88	05 C7 04 00 9F FE 91
Decode Data Packet Format	Send Raw Decode Data : 07 C6 04 08 00 EE 00 FE 39 Send Packeted Decode Data: 07 C6 04 08 00 EE 01 FE 38	05 C7 04 00 EE FE 42
Host Serial Response Time-out	0.1s: 07 C6 04 08 00 9B 01 FE 8B	05 C7 04 00 9B FE 95
Stop Bit Select	1 Stop Bit : 07 C6 04 08 00 9D 01 FE 89 2 Stop Bits : 07 C6 04 08 00 9D 02 FE 88	05 C7 04 00 9D FE 93
Intercharacter Delay	1s: 07 C6 04 08 00 6E 01 FE B8	05 C7 04 00 6E FE C2

Host Character Time-out	500ms:07 C6 04 08 00 EF 32 FE 06 200ms:07 C6 04 08 00 EF 14 FE 24 50ms: 07 C6 04 08 00 EF 05 FE 33	05 C7 04 00 EF FE 41
Communication Mode	Serial Port : 08 C6 04 08 00 F2 01 00 FE 33 USB KBW: 08 C6 04 08 00 F2 01 01 FE 32 USB Serial Port : 08 C6 04 08 00 F2 01 02 FE 31 AUTO UK: 08 C6 04 08 00 F2 01 03 FE 30 AUTO UV: 08 C6 04 08 00 F2 01 04 FE 2F TTDATA: 08 C6 04 08 00 F2 01 0A FE 29 TTDATA+Serial Port : 08 C6 04 08 00 F2 01 0B FE 28	06 C7 04 00 F2 01 FE 3C
Wiegand protocol type	AUTO: 08 C6 04 08 00 F2 A4 00 FD 90 WG26: 08 C6 04 08 00 F2 A4 01 FD 8F WG34: 08 C6 04 08 00 F2 A4 02 FD 8E WG66: 08 C6 04 08 00 F2 A4 03 FD 8D	06 C7 04 00 F2 A4 FD 99
Wiegand 26 Protocol Output Mode	3+5: 08 C6 04 08 00 F2 A5 00 FD 8F RAW: 08 C6 04 08 00 F2 A5 01 FD 8E	06 C7 04 00 F2 A5 FD 98
PS2 Mode	AUTO: 08 C6 04 08 00 F2 A6 00 FD 8E PS2: 08 C6 04 08 00 F2 A6 01 FD 8D	06 C7 04 00 F2 A6 FD 97
Floodlight Control	Lighting when Read:08 C6 04 08 00 F2 02 00 FE 32 Always Lighting:08 C6 04 08 00 F2 02 01 FE 31 Always Close: 08 C6 04 08 00 F2 02 02 FE 30	06 C7 04 00 F2 02 FE 3B
Positioning Light Control	Lighting when Read:08 C6 04 08 00 F2 03 00 FE 31 Always Lighting:08 C6 04 08 00 F2 03 01 FE 30 Always Close: 08 C6 04 08 00 F2 03 02 FE 2F	06 C7 04 00 F2 03 FE 3A
Sensitivity Level	Special:08 C6 04 08 00 F2 04 00 FE 30 High:08 C6 04 08 00 F2 04 01 FE 2F Middle:08 C6 04 08 00 F2 04 02 FE 2E Low:08 C6 04 08 00 F2 04 03 FE 2D	06 C7 04 00 F2 04 FE 39
Custom Sensitivity	00:08 C6 04 08 00 F3 01 00 FE 32 01:08 C6 04 08 00 F3 01 01 FE 31 05:08 C6 04 08 00 F3 01 05 FE 2D 10:08 C6 04 08 00 F3 01 0A FE 28 15:08 C6 04 08 00 F3 01 0F FE 23	06 C7 04 00 F3 01 FE 3B

Stability of Induction Time	500ms:08 C6 04 08 00 F3 02 05 FE 2C 1000ms:08 C6 04 08 00 F3 02 0A FE 27 300ms: 08 C6 04 08 00 F3 02 03 FE 2E	06 C7 04 00 F3 02 FE 3A
Output Interval of The Same Code	1500ms:08 C6 04 08 00 F3 03 0F FE 21 500ms:08 C6 04 08 00 F3 03 05 FE 2B 300ms: 08 C6 04 08 00 F3 03 03 FE 2D	06 C7 04 00 F3 03 FE 39
1D Identifies Two Barcodes1D	Disable: 08 C6 04 08 00 F2 10 00 FE 24 Enable: 08 C6 04 08 00 F2 10 01 FE 23	06 C7 04 00 F2 10 FE 2D
Output Product Information	None	06 C7 04 00 F4 01 FE 3A
Output Character Set Type	Raw: 08 C6 04 08 00 F2 06 00 FE 2E GBK:08 C6 04 08 00 F2 06 01 FE 2D UNICODE:08 C6 04 08 00 F2 06 02 FE 2C	06 C7 04 00 F2 06 FE 37
Input Character Set Type	AUTO: 08 C6 04 08 00 F2 AB 00 FD 89 GBK(GB2312): 08 C6 04 08 00 F2 AB 01 FD 88 UTF8: 08 C6 04 08 00 F2 AB 02 FD 87 ASCII: 08 C6 04 08 00 F2 AB 03 FD 86	06 C7 04 00 F2 AB FD 92
USB Type	USB1.1: 08 C6 04 08 00 F2 0F 00 FE 25 USB2.0 08 C6 04 08 00 F2 0F 01 FE 24	06 C7 04 00 F2 0F FE 2E
Country/Language Keyboard	America: 08 C6 04 08 00 F6 01 01 FE 2E Belgium: 08 C6 04 08 00 F6 01 02 FE 2D Denmark: 08 C6 04 08 00 F6 01 06 FE 29	06 C7 04 00 F6 01 FE 38
Time interval that keyboard outputs character	0ms: 08 C6 04 08 00 F3 04 00 FE 2F 5ms: 08 C6 04 08 00 F3 04 01 FE 2E 10ms: 08 C6 04 08 00 F3 04 02 FE 2D	06 C7 04 00 F3 04 FE 38
Quick Settings of Keyboard Output Time Interval	0ms: 08 C6 04 08 00 F2 B2 00 FD 82 10ms: 08 C6 04 08 00 F2 B2 01 FD 81 50ms: 08 C6 04 08 00 F2 B2 02 FD 80	06 C7 04 00 F2 B2 FD 8B
Letter case conversion	Normal Letter Case: 08 C6 04 08 00 F2 A1 00 FD 93 All Uppercase: 08 C6 04 08 00 F2 A1 01 FD 92 All Lowercase: 08 C6 04 08 00 F2 A1 02 FD 91 Case Inversion: 08 C6 04 08 00 F2 A1 03 FD 90	06 C7 04 00 F2 A1 FD 9C
Output Ctrl Combination Key	Disable: 08 C6 04 08 00 F2 AD 00 FD 87 Enable: 08 C6 04 08 00 F2 AD 01 FD 86	06 C7 04 00 F2 AD FD 90
Keyboard Type	Standard Keyboard: 08 C6 04 08 00 F2 B4 00 FD 80 Virtual Keyboard: 08 C6 04 08 00 F2 B4 01 FD 7F	06 C7 04 00 F2 B4 FD 89
Boot Event	Disable: 08 C6 04 08 00 F2 A2 00 FD 92 Enable: 08 C6 04 08 00 F2 A2 01 FD 91	06 C7 04 00 F2 A2 FD 9B
Trigger Event	Disable Event : 08 C6 04 08 00 F2 A3 00 FD 91	06 C7 04 00 F2 A3 FD 9A

	Enable Event : 08 C6 04 08 00 F2 A3 01 FD 90 Eable GPIO Pin Event GPIO: 08 C6 04 08 00 F2 A3 02 FD 8F Enable Event&GPIO Pin Event : 08 C6 04 08 00 F2 A3 03 FD 8E	
Enable Setting Code Password Mode	Disable: 08 C6 04 08 00 F2 A7 00 FD 8D Enable: 08 C6 04 08 00 F2 A7 01 FD 8C	06 C7 04 00 F2 A7 FD 96
Input Setting Code Password	Password 68 : 08 C6 04 08 00 F3 05 68 FD C6 Password 96: 08 C6 04 08 00 F3 05 96 FD 98	06 C7 04 00 F3 05 FE 37
Modify Setting Code Password	New Password 68 新密码 68: 08 C6 04 08 00 F3 06 68 FD C5 New Password 96 新密码 96: 08 C6 04 08 00 F3 06 96 FD 97	06 C7 04 00 F3 06 FE 36
Logout Password	08 C6 04 08 00 F2 A9 00 FD 8B	06 C7 04 00 F2 A9 FD 94
Disable passive trigger scanning	Disable: 08 C6 04 08 00 F2 A8 00 FD 8C Enable: 08 C6 04 08 00 F2 A8 01 FD 8B	06 C7 04 00 F2 A8 FD 95
1D Global Switch	Disable : 08 C6 04 08 00 F2 11 00 FE 23 Enable : 08 C6 04 08 00 F2 11 01 FE 22	06 C7 04 00 F2 11 FE 2C
2D Global Switch	Disable : 08 C6 04 08 00 F2 50 00 FD E4 Enable : 08 C6 04 08 00 F2 50 01 FD E3	06 C7 04 00 F2 50 FD ED
All Barcode Switch	Disable : 08 C6 04 08 00 F2 90 00 FD A4 Enable : 08 C6 04 08 00 F2 90 01 FD A3	06 C7 04 00 F2 90 FD AD

About 1D Barcode(only for 1D)

UPC-A

Scan	Disable: 07 C6 04 08 00 01 00 FF 26 Enable: 07 C6 04 08 00 01 01 FF 25	05 C7 04 00 01 FF 2F
Transmit UPC-A Check Digit	Disable: 07 C6 04 08 00 28 00 FE FF Enable: 07 C6 04 08 00 28 01 FE FE	05 C7 04 00 28 FF 08
Supplemental Code	None 无(00): 07 C6 04 08 00 10 00 FF 17 Enable (01) : 07 C6 04 08 00 10 01 FF 16 AUTO Distinguish (02): 07 C6 04 08 00 10 02 FF 15 378/379 Supplemental Mode 378/379 (04) : 07 C6 04 08 00 10 04 FF 13 978 Supplemental Mode 978 (05) : 07 C6 04 08 00 10 05 FF 12 Precise Mode (03) : 07 C6 04 08 00 10 03 FF 14	05 C7 04 00 10 FF 20
Preamble	None(00): 07 C6 04 08 00 22 00 FF 05 System Character (01) : 07 C6 04 08 00 22 01	05 C7 04 00 22 FF 0E

	FF 04 Country Character & System Character (02): 07 C6 04 08 00 22 02 FF 03	
UPC-E		
Scan	Disable: 07 C6 04 08 00 02 00 FF 25 Enable: 07 C6 04 08 00 02 01 FF 24	05 C7 04 00 02 FF 2E
Transmit UPC-E Check Digit	Disable: 07 C6 04 08 00 29 00 FE FE Enable: 07 C6 04 08 00 29 01 FE FD	05 C7 04 00 29 FF 07
Supplemental Code	None 无(00): 07 C6 04 08 00 10 00 FF 17 Enable (01) : 07 C6 04 08 00 10 01 FF 16 AUTO Distinguish(02): 07 C6 04 08 00 10 02 FF 15 378/379 Supplemental Mode 378/379 (04) : 07 C6 04 08 00 10 04 FF 13 978 Supplemental Mode 978 (05) : 07 C6 04 08 00 10 05 FF 12 Precise Mode (03) : 07 C6 04 08 00 10 03 FF 14	05 C7 04 00 10 FF 20
Preamble	None(00): 07 C6 04 08 00 23 00 FF 04 System Character (01) : 07 C6 04 08 00 23 01 FF 03 Country Character & System Character (02): 07 C6 04 08 00 23 02 FF 02	05 C7 04 00 23 FF 0D
Convert UPC-E to UPC-A	Disable: 07 C6 04 08 00 25 00 FF 02 Enable: 07 C6 04 08 00 25 01 FF 01	05 C7 04 00 25 FF 0B
EAN-8		
Scan	Disable: 07 C6 04 08 00 04 00 FF 23 Enable: 07 C6 04 08 00 04 01 FF 22	05 C7 04 00 04 FF 2C
Supplemental Code	None(00): 07 C6 04 08 00 10 00 FF 17 Enable (01) : 07 C6 04 08 00 10 01 FF 16 AUTO Distinguish (02): 07 C6 04 08 00 10 02 FF 15 378/379 Supplemental Mode 378/379 (04) : 07 C6 04 08 00 10 04 FF 13 978 Supplemental Mode 978 (05) : 07 C6 04 08 00 10 05 FF 12 Precise Mode (03) : 07 C6 04 08 00 10 03 FF 14	05 C7 04 00 10 FF 20
EAN-8 is expanded to EAN-13	Disable: 07 C6 04 08 00 27 00 FF 00 Enable: 07 C6 04 08 00 27 01 FE FF	05 C7 04 00 27 FF 09
EAN-13		
Scan	Disable: 07 C6 04 08 00 03 00 FF 24 Enable: 07 C6 04 08 00 03 01 FF 23	05 C7 04 00 03 FF 2D

Supplemental Code	None(00): 07 C6 04 08 00 10 00 FF 17 Enable (01) : 07 C6 04 08 00 10 01 FF 16 AUTO Distinguish (02): 07 C6 04 08 00 10 02 FF 15 378/379 Supplemental Mode 378/379: 07 C6 04 08 00 10 04 FF 13 978 Supplemental Mode 978 (05) : 07 C6 04 08 00 10 05 FF 12 Precise Mode (03): 07 C6 04 08 00 10 03 FF 14	05 C7 04 00 10 FF 20
Bookland EAN(ISBN)		
Scan	Disable: 07 C6 04 08 00 53 00 FE D4 Enable: 07 C6 04 08 00 53 01 FE D3	05 C7 04 00 53 FE DD
Format	Output 10 bits:08 C6 04 08 00 F1 40 00 FD F5 Output 13 bits:08 C6 04 08 00 F1 40 01 FD F4	06 C7 04 00 F1 40 FD FE
UPC/EAN Security Level	Level 1: 07 C6 04 08 00 4D 00 FE DA Level 2: 07 C6 04 08 00 4D 01 FE D9 Level 3: 07 C6 04 08 00 4D 02 FE D8 Level 4: 07 C6 04 08 00 4D 03 FE D7	05 C7 04 00 4D FE E3
Code 128 Symbolologies Switch	Disable: 07 C6 04 08 00 08 00 FF 1F Enable: 07 C6 04 08 00 08 01 FF 1E	05 C7 04 00 08 FF 28
GS1-128 (formerly UCC/EAN-128)	Disable: 07 C6 04 08 00 0E 00 FF 19 Enable: 07 C6 04 08 00 0E 01 FF 18	05 C7 04 00 0E FF 22
ISBT 128	Disable: 07 C6 04 08 00 54 00 FE D3 Enable: 07 C6 04 08 00 54 01 FE D2	05 C7 04 00 54 FE DC
Code 39		
Code 39	Disable: 07 C6 04 08 00 00 00 FF 27 Enable: 07 C6 04 08 00 00 01 FF 26	05 C7 04 00 00 FF 30
Set Lengths for Code 39	One Discrete Length: Length 06: 09 C6 04 08 00 12 06 13 00 FE FA Length 16: 09 C6 04 08 00 12 10 13 00 FE F0 Length 14: 09 C6 04 08 00 12 0E 13 00 FE F2 Two Discrete Lengths: 02 and 04 :	06 C7 04 00 12 13 FF 0A

	09 C6 04 08 00 12 04 13 02 FE FA 16 and 14 16和14: 09 C6 04 08 00 12 10 13 0E FE E2 Length Within Range: 02 to 09 : 09 C-6 04 08 00 12 02 13 09 FE F5 0x02 to 0x37(55) : 09 C6 04 08 00 12 02 13 37 FE C7 14 to 15: 09 C6 04 08 00 12 0E 13 0F FE E3 14 to 15 (Temporary) : 09 C6 04 00 00 12 0E 13 0F FE EB 15 to 16 : 09 C6 04 08 00 12 0F 13 10 FE E1 Any Length: 09 C6 04 08 00 12 00 13 00 FE F0	
Code 39 Check Digit Verification	Disable: 07 C6 04 08 00 30 00 FE F7 Enable: 07 C6 04 08 00 30 01 FE F6	05 C7 04 00 30 FF 00
Transmit Code 39 Check Digit	Disable: 07 C6 04 08 00 2B 00 FE FC Enable: 07 C6 04 08 00 2B 01 FE FB	05 C7 04 00 2B FF 05
Code 39 Full ASCII	07 C6 04 08 00 11 01 FF 15	05 C7 04 00 11 FF 1F
Code 39 Transport Start Character and Terminator	Disable: 08 C6 04 08 00 F2 30 00 FE 04 Enable: 08 C6 04 08 00 F2 30 01 FE 03	06 C7 04 00 F2 30 FE 0D
Convert Code 39 to Code 32 (Italian Pharma Code)	Disable: 07 C6 04 08 00 56 00 FE D1 Enable: 07 C6 04 08 00 56 01 FE D0	05 C7 04 00 56 FE DA
Code 32 Prefix	Disable: 07 C6 04 08 00 E7 00 FE 40 Enable: 07 C6 04 08 00 E7 01 FE 3F	05 C7 04 00 E7 FE 49
Code 93		
Enable Code 93	Disable: 07 C6 04 08 00 09 00 FF 1E Enable: 07 C6 04 08 00 09 01 FF 1D	05 C7 04 00 09 FF 27
Set Lengths for Code 93	One Discrete Length: 04: 09 C6 04 08 00 1A 04 1B 00 FE EC Two Discrete Lengths: 04和06: 09 C6 04 08 00 1A 06 1B 04 FE E6 Length Within Range: 04 to 09: 09 C6 04 08 00 1A 04 1B 09 FE E3 Any Length : 09 C6 04 08 00 1A 00 1B 00 FE F0	06 C7 04 00 1A 1B FE FA
Code 11		

Enable Code 11 Barcode Scanning	Disable: 07 C6 04 08 00 0A 00 FF 1D Enable: 07 C6 04 08 00 0A 01 FF 1C	05 C7 04 00 0A FF 26
Set Lengths for Code 11	One Discrete Length: 06: 09 C6 04 08 00 1C 06 1D 00 FE E6 Two Discrete Lengths: 04和06: 09 C6 04 08 00 1C 06 1D 04 FE E2 Length Within Range: 04 to 09: 09 C6 04 08 00 1C 04 1D 09 FE DF Any Length : 09 C6 04 08 00 1C 00 1D 00 FE EC	06 C7 04 00 1C 1D FE F6
Code 11 Check Digit Verification	None 无: 07 C6 04 08 00 34 00 FE F3 1 bit 1 位: 07 C6 04 08 00 34 01 FE F2 2 bits 2 位: 07 C6 04 08 00 34 02 FE F1	05 C7 04 00 34 FE FC
Transmit Code 11 Check Digit	Disable: 07 C6 04 08 00 2F 00 FE F8 Enable: 07 C6 04 08 00 2F 01 FE F7	05 C7 04 00 2F FF 01
Interleaved 2 of 5/ITF		
Enable Interleaved 2 of 5/ITF/	Disable: 07 C6 04 08 00 06 00 FF 21 Enable: 07 C6 04 08 00 06 01 FF 20	05 C7 04 00 06 FF 2A
Interleaved 2 of 5/ITF/		
Set Scanning Data Lengths for Interleaved 2 of 5	One Discrete Length: 06: 09 C6 04 08 00 16 06 17 00 FE F2 Two Discrete Lengths: 04 and 06 : 09 C6 04 08 00 16 06 17 04 FE EE Length Within Range: 04 to 09: 09 C6 04 08 00 16 04 17 09 FE EB Any Length : 09 C6 04 08 00 16 00 17 00 FE F8	06 C7 04 00 16 17 FF 02
Interleaved 2 of 5 Check Digit Verification	Disable: 07 C6 04 08 00 31 00 FE F6 Enable: 07 C6 04 08 00 31 01 FE F5	05 C7 04 00 31 FE FF
Transmit Interleaved 2 of 5 Check Digit	Disable: 07 C6 04 08 00 2C 00 FE FB Enable: 07 C6 04 08 00 2C 01 FE FA	05 C7 04 00 2C FF 04
Discrete 2 of 5 /Industrial 2 of 5/IND25		
Enable Discrete 2 of 5 /Industrial 2 of 5/IND25	Disable: 07 C6 04 08 00 05 00 FF 22 Enable: 07 C6 04 08 00 05 01 FF 21	05 C7 04 00 05 FF 2B
Set Scanning Data Lengths	One Discrete Length: 06: 09 C6 04 08 00 14	06 C7 04 00 14 15 FF 06

for Discrete 2 of 5	06 15 00 FE F6 Two Discrete Lengths: 04和06: 09 C6 04 08 00 14 06 15 04 FE F2 Length Within Range: 04 to 09: 09 C6 04 08 00 14 04 15 09 FE EF Any Length : 09 C6 04 08 00 14 00 15 00 FE FC	
Matrix 25		
Matrix 25	Disable: 08 C6 04 08 00 F2 20 00 FE 14 Enable: 08 C6 04 08 00 F2 20 01 FE 13	06 C7 04 00 F2 20 FE 1D
Matrix 25 Check Digit Verification	Disable: 08 C6 04 08 00 F2 21 00 FE 13 Enable: 08 C6 04 08 00 F2 21 01 FE 12	06 C7 04 00 F2 21 FE 1C
Matrix 25		
Transmit Matrix 25 Check Character	Disable: 08 C6 04 08 00 F2 22 00 FE 12 Enable: 08 C6 04 08 00 F2 22 01 FE 11	06 C7 04 00 F2 22 FE 1B
Set Lengths for Matrix 25	One Discrete Length: 06: 0B C6 04 08 00 F5 00 06 F5 01 00 FD 32 Two Discrete Lengths: 04 and 06 : 0B C6 04 08 00 F5 00 06 F5 01 04 FD 2E Length Within Range: 04 to 09 : 0B C6 04 08 00 F5 00 04 F5 01 09 FD 2B Any Length : 0B C6 04 08 00 F5 00 00 F5 01 00 FD 38	08 C7 04 00 F5 00 F5 01 FD 42
Standard 25 / IATA 25		
Standard 25/IATA 25	Disable: 08 C6 04 08 00 F2 23 00 FE 11 Enable: 08 C6 04 08 00 F2 23 01 FE 10	06 C7 04 00 F2 23 FE 1A
Standard 25 Check Digit Verification	Disable: 08 C6 04 08 00 F2 24 00 FE 10 Enable: 08 C6 04 08 00 F2 24 01 FE 0F	06 C7 04 00 F2 24 FE 19
Transmit Standard 25 Check Character	Disable: 08 C6 04 08 00 F2 25 00 FE 0F Enable: 08 C6 04 08 00 F2 25 01 FE 0E	06 C7 04 00 F2 25 FE 18
Set Lengths for Standard 25	One Discrete Length : 06: 09 C6 04 08 00 F5 02 06 F5 03 00 FD 2E Two Discrete Lengths:	08 C7 04 00 F5 02 F5 03 FD 3E

	04 and 06 : 09 C6 04 08 00 F5 02 06 F5 03 04 FD 2A Length Within Range: 04 to 09 : 09 C6 04 08 00 F5 02 04 F5 03 09 FD 27 Any Length : 09 C6 04 08 00 F5 02 00 F5 03 00 FD 34	
Enable Codabar Barcode Scanning	Disable: 07 C6 04 08 00 07 00 FF 20 Enable: 07 C6 04 08 00 07 01 FF 1F	05 C7 04 00 07 FF 29
Set Lengths for Codabar	One Discrete Length: 04: 09 C6 04 08 00 18 04 19 00 FE F0 Two Discrete Lengths: 09 C6 04 08 00 18 05 19 04 FE EB Length Within Range: 04 to 09 : 09 C6 04 08 00 18 04 19 09 FE E7 Any Length : 09 C6 04 08 00 18 00 19 00 FE F4	06 C7 04 00 18 19 FE FE
NOTIS Transmit Format	Disable: 07 C6 04 08 00 37 00 FE F0 Enable: 07 C6 04 08 00 37 01 FE EF	05 C7 04 00 37 FE F9
Start Character and Terminator	ABCD/ABCD: 08 C6 04 08 00 F2 31 00 FE 03 ABCD/TN*E: 08 C6 04 08 00 F2 31 01 FE 02	06 C7 04 00 F2 31 FE 0C
Letter Case Setting of Start Character and Terminator	Uppercase : 08 C6 04 08 00 F2 32 00 FE 02 Lowercase : 08 C6 04 08 00 F2 32 01 FE 01	06 C7 04 00 F2 32 FE 0B
MSI /MSI PLESSEY		
Enable MSI /MSI PLESSEY Barcode Scanning	Disable: 07 C6 04 08 00 0B 00 FF 1C Enable: 07 C6 04 08 00 0B 01 FF 1B	05 C7 04 00 0B FF 25
Set Lengths for MSI	One Discrete Length: 04: 09 C6 04 08 00 1E 04 1F 00 FE E4 Two Discrete Lengths: 04 and 05 : 09 C6 04 08 00 1E 05 1F 04 FE DF Length Within Range: 02 to 09 : 09 C6 04 08 00 1E 02 1F 09 FE DD Any Length : 09 C6 04 08 00 1E 00 1F 00 FE E8	06 C7 04 00 1E 1F FE F2

MSI Check Digit	1 bit : 07 C6 04 08 00 32 00 FE F5 2 bits :07 C6 04 08 00 32 01 FE F4	05 C7 04 00 32 FE FE
Transmit MSI Check Digit	Disable: 07 C6 04 08 00 2E 00 FE F9 Enable: 07 C6 04 08 00 2E 01 FE F8	05 C7 04 00 2E FF 02
MSI Check Digit Algorithm	MOD10/11: 07 C6 04 08 00 33 00 FE F4 MOD10/10: 07 C6 04 08 00 33 01 FE F3	05 C7 04 00 33 FE FD

GS1 DataBar(RSS)

Enable GS1 DataBar(RSS) 14 Barcode Scanning	Disable: 08 C6 04 08 00 F0 52 00 FD E4 Enable: 08 C6 04 08 00 F0 52 01 FD E3	06 C7 04 00 F0 52 FD ED
Enable GS1 DataBar Limited Barcode Scanning	Disable: 08 C6 04 08 00 F0 53 00 FD E3 Enable: 08 C6 04 08 00 F0 53 01 FD E2	06 C7 04 00 F0 53 FD EC
Enable GS1 DataBar Expanded Barcode Scanning	Disable: 08 C6 04 08 00 F0 54 00 FD E2 Enable: 08 C6 04 08 00 F0 54 01 FD E1	06 C7 04 00 F0 54 FD EB

About 2D Barcode(only for 2D)

PDF417

PDF417	Enable: 07 C6 04 08 00 0F 01 FF 17 Disable: 07 C6 04 08 00 0F 00 FF 18	05 C7 04 00 0F FF 21
Read Multi-code	Read Monocode: 08 C6 04 08 00 F2 60 00 FD D4 Read Dicode: 08 C6 04 08 00 F2 60 01 FD D3 Read Monocode /Dicode: 08 C6 04 08 00 F2 60 02 FD D2	06 C7 04 00 F2 60 FD DD
Read Normal Phase/ Phase Reversal	Read Normal Phase: 08 C6 04 08 00 F2 61 00 FD D3 Read Phase Reversal: 08 C6 04 08 00 F2 61 01 FD D2 Read Normal Phase/ Phase Reversal: 08 C6 04 08 00 F2 61 02 FD D1	06 C7 04 00 F2 61 FD DC

QRCode

QRCode	Enable: 08 C6 04 08 00 F0 25 01 FE 10 Disable: 08 C6 04 08 00 F0 25 00 FE 11	06 C7 04 00 F0 25 FE 1A
Read Multi-code	Read Monocode: 08 C6 04 08 00 F2 65 00 FD CF	06 C7 04 00 F2 65 FD D8

	Read Dicode: 08 C6 04 08 00 F2 65 01 FD CE Read Monocode /Dicode: 08 C6 04 08 00 F2 65 02 FD CD	
ECI Control ECI	Not Output:08 C6 04 08 00 F2 66 00 FD CE Output:08 C6 04 08 00 F2 66 01 FD CD	06 C7 04 00 F2 66 FD D7
MicroQRCode		
MicroQRCode	Enable: 08 C6 04 08 00 F1 3D 01 FD F7 Disable: 08 C6 04 08 00 F1 3D 00 FD F8	06 C7 04 00 F1 3D FE 01
DataMatrix		
DataMatrix	Enable: 08 C6 04 08 00 F0 24 01 FE 11 Disable: 08 C6 04 08 00 F0 24 00 FE 12	06 C7 04 00 F0 24 FE 1B
Read Multi-code	Read Monocode: 08 C6 04 08 00 F2 6A 00 FD CA Read Dicode: 08 C6 04 08 00 F2 6A 01 FD C9 Read Monocode /Dicode: 08 C6 04 08 00 F2 6A 02 FD C8	06 C7 04 00 F2 6A FD D3
Read Normal Phase/ Phase Reversal	Read Normal Phase: 08 C6 04 08 00 F2 6B 00 FD C9 Read Phase Reversal: 08 C6 04 08 00 F2 6B 01 FD C8 Read Normal Phase/ Phase Reversal: 08 C6 04 08 00 F2 6B 02 FD C7	06 C7 04 00 F2 6B FD D2
ECI Control ECI	Not Output:08 C6 04 08 00 F2 6C 00 FD C8 Output:08 C6 04 08 00 F2 6C 01 FD C7	06 C7 04 00 F2 6C FD D1
MaxiCode		
MaxiCode	Disable: 08 C6 04 08 00 F0 26 00 FE 10 En0000able: 08 C6 04 08 00 F0 26 01 FE 0F	06 C7 04 00 F0 26 FE 19
Aztec		
Aztec	Disable: 08 C6 04 08 00 F0 28 00 FE 0E Enable: 08 C6 04 08 00 F0 28 01 FE 0D	06 C7 04 00 F0 28 FE 17
Han Xin Code		
Han Xin Code	Disable: 08 C6 04 08 00 F0 2F 00 FE 07 Enable: 08 C6 04 08 00 F0 2F 01 FE 06	06 C7 04 00 F0 2F FE 10
Read Multi-code	Read Monocode: 08 C6 04 08 00 F2 70 00 FD C4 Read Dicode: 08 C6 04 08 00 F2 70 01 FD C3 Read Monocode /Dicode: 08 C6 04 08 00 F2 70 02 FD C2	06 C7 04 00 F2 70 FD CD
Read Normal Phase/ Phase Reversal	Read Normal Phase: 08 C6 04 08 00 F2 71 00 FD C3 Read Phase Reversal: 08 C6 04 08 00 F2 71 01 FD C2	06 C7 04 00 F2 71 FD CC

	Read Normal Phase/ Phase Reversal: 08 C6 04 08 00 F2 71 02 FD C1	
ISSN	Disable: 08 C6 04 08 00 F2 33 00 FE 01 Enable: 08 C6 04 08 00 F2 33 01 FE 00	06 C7 04 00 F2 33 FE 0A
PLESSEY	Disable: 08 C6 04 08 00 F2 34 00 FE 00 Enable: 08 C6 04 08 00 F2 34 01 FD FF	06 C7 04 00 F2 34 FE 09

Guangzhou Yoko Electron Co.,Ltd

Address: No.4 Changrong Road,Huangpu District,Guangzhou,
Guangdong Province,China

TEL: 020-8206 5617

FAX: 020-82065420

<http://www.chinayoko.com/>

