



ZBA Inc.

Z-5130 Software Protocol

Specification V1.16



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Confidential Document

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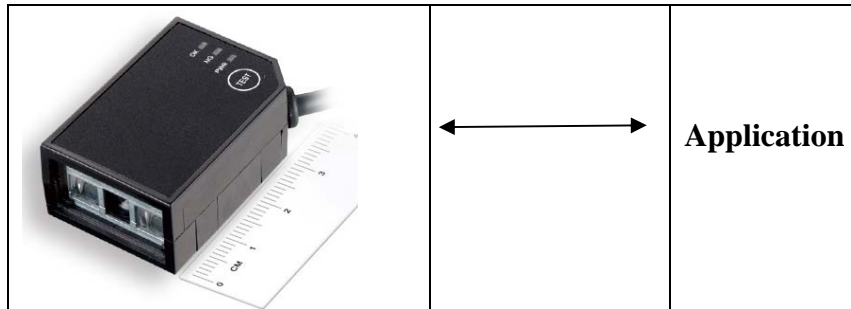
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I. Introduction

This document aims to describe the protocol of communication between CT-131 and remote application:



II. Hardware Configuration

This communication between the Z-5130 MPU and the Remote Application is based its hardware link:

A. UART Setting

RS232 (RxD & TxD)

- . Baud Rate: 9600 (changeable)
- . Data Bits: 8 (changeable)
- . Parity: None (changeable)
- . Hardware flow control : disable (changeable)
- . Stop bits : 1 (changeable)



III. Communication Protocol (UART)

Between the Z-5130 and the remote application

1. Normal mode:

Format of packet

To send a data (command or configuration data...) to the Z-5130, the remote application has to encapsulate it:

There are three types to Format of packet

A. Type I: General Commands

Command ID (0xAA)	Command String
1 byte	4 bytes

Examples:

Sending <0xAA> <RC01> to Z-5130 will enable Code 39.

Sending <0xAA> <RD01> to Z-5130 will disable Code 39.

- *When receive a General Command, Z-5130 will execute it and send an ACK(0x06) to remote application.*

B. Type II: Software Trigger Command

Trigger command format

Level Trigger Scan Command 1 : <ESC> A0 <CR>

(Scan off when trigger off command by received)

Level Trigger Scan Command 2 : <ESC> A2 <CR>

(Scan off when data scanned)

Edge Trigger Scan Command 1 : <ESC> A0. mm <CR>

(Scan off when “mm” timeout)

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mm=1 ~ 60 (Sec)

Edge Trigger Scan Command 2 : <ESC> A2. mm <CR>

(Scan off when data scanned or “mm” timeout)

mm=1 ~ 60 (Sec)

Trigger off Command : <ESC> A1 <CR>

● **NOTE :**

1. The edge trigger command that do not control by the trigger off command.
2. Scanner will start the next scan if it receives an edge trigger command and the device remain “mm” time.

Examples:

Sending <ESC> “A0” <CR> (0x1b 0x41 0x30 0x0d) to Z-5130 will active the Z-5130 to scan .

Sending <ESC> “A1” <CR> (0x1b 0x41 0x31 0x0d) to Z-5130 will off scan.

C. Type III: Direct Write Command

Command ID (0xAA)	Write Command “YW”	Address	Size of data	Data
1 byte	2 bytes	1 byte	1 byte	Varies

Parameter	Data size	Parameter description
Command ID (0xAA)	1 byte	Inform Z-5130 this is a start of command
Write Command 0x59,0x57 (YW)	2 bytes	Inform Z-5130 remote application will write some data directly to flash memory of configuration.
Address	1 byte	The specify address of flash memory to write.
Size of Data	1 byte	Size of Data
Data	varies	The data you want to write to the flash memory

Example:

Flash memory Address 0 stands for EAN configuration.

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```

(Address 0) |
            | Bit 0 = 1 ---> Read EAN-13 Enable
            | = 0 ---> Disable
            |
            | Bit 1 = 1 ---> Read EAN-8 Enable
            | = 0 ---> Disable
            |
            | Bit 2 = 1 ---> Read EAN Add 2
            | = 0 ---> Disable
            |
            | Bit 3 = 1 ---> Read EAN Add 5
            | = 0 ---> Disable
            |
            | Bit 5 = 1 ---> Send EAN-13 Check digit
            | = 0 ---> No Send
            |
            | Bit 7 = 1 ---> Send EAN-8 Check digit
            | = 0 ---> No Send

```

If you want to enable EAN-13 (with Add 2, Add5 and sending Check digit) and disable EAN-8) you can:

Sending command string: <0xaa> <0x59> <0x57> <0x0>< 0x01>< 0x2d>

- When receive a Direct Write Command, Z-5130 will execute it and send an ACK(06H) to remote application.

D. Type IV: Direct Read Command

Command ID (0xAA)	Read Command "YR"	Address	Size of data
1 byte	2 bytes	1 byte	1 byte

Parameter	Data size	Parameter description
Command ID (0xAA)	1 byte	inform Z-5130 this is a start of command
Read Command 0x59,0x52 (YR)	2 bytes	inform Z-5130 remote application want to get some data directly from flash memory of configuration..
Address	1 byte	The specify address of flash memory to read.
Size of Data	1 byte	Size of Data



If you want to know the configuration of EAN you can:
Send 0xAA delay "YR" 0x0 0x1 to Z-5130.

- When receive a Direct Read Command, Z-5130 will send the specify data and an ACK(0x06) to remote application.

IV. List of General Command

A. System commands

----	Reset (return to factory default)
%%/	Display firmware version
KE94	Return as customer default
KE95	Save as customer default
KE77	Return as OPOS port default
KE87	Return as USB-virtual COM port default
KE97	Return to HID USB default
KE99	Return to RS232 default
KE01	IBM PC/AT/PS/2 Keyboard emulation

B. Beeper Tone setting

GR01	Medium beeper tone .2.5KHZ
GR02	Low beeper tone.1.0KHZ
GR03	High beeper tone (Default) ,2.7KHZ
GR05	Disable beeper

C. Sound duration setting

GR10	Long sound duration (100msec)
GR11	Medium sound duration(50msec)
GR12	Short sound duration(20msec)
GR13	Very short sound duration(5msec)
GR14	Long sound duration (200msec)
GR15	Very long sound duration (500msec)

D. LED/Beeper

LB00	Led/Beep after transmission. Use this bar code to indicate a "good read" after a bar code has been successfully decoded.
LB01	Led/Beep before transmission, Use this bar code to indicate a good read" after successfully.(Default)



LB03	Power-up tone enable
LB04	Power –up tone disable (Default)

E. Scan function Setting

SM01	Trigger mode, The scanner becomes inactive as soon as the data is transmitted. It must be triggered to become active again.(Default)
SM02	Auto scan mode, In auto scan mode, the scanner is still active after the data is transmitted, but the successive transmission of the same bar code is not allowed when the trigger switch is pressed again..
SM04	Alternate mode. This scanner will light up when press the scanner trigger switch once. And, the scanner will turn off for next pressing
SM05	Repeat mode. This mode is similar to Auto scan mode, but double reading for the same barcode is prohibited if the scanner switch is pressed.
SM06	Momentary mode. The scanner will light up only when the trigger switch is pressed. The scanner will turn off when the trigger switch is release.

F. Same Code Delay

SD00	Same code delay time 0msec (Test mode)
SD01	Same code delay time 50msec
SD02	Same code delay time 100msec
SD03	Same code delay time 200msec
SD04	Same code delay time 300msec
SD05	Same code delay time 400msec
SD06	Same code delay time 500msec
SD07	Same code delay time 600msec
SD08	Same code delay time 700msec
SD09	Same code delay time 800msec
SD10	Same code delay time 900msec
SD11	Same code delay time 1000msec
SD12	Same code delay time Infinite

G. Keyboard Wedge Setting

KL00	Enable Alt mode
KL01	Keyboard language support---USA
KL02	Keyboard language support---UK
KL03	Keyboard language support---Germany
KL04	Keyboard language support---French
KL05	Keyboard language support---Spanish
KL06	Keyboard language support---Italian
KL07	Keyboard language support---Swiss
KL08	Keyboard language support---Switzerland
KL09	Keyboard language support---Belgium
KL10	Keyboard language support---Portugal
KL11	Keyboard language support---Turkish
KL12	Keyboard language support---Denmark
KL13	Keyboard language support---Norway
KL15	Keyboard language support---Japanese



CP00	Capital lock on
CP01	Capital lock off
CP05	Function key emulation enable
CP06	Function key emulation disable
CP18	Send number as normal data
CP19	Send number as keypad data
CP20	Alphabet follow as keyboard
CP21	Alphabet always upper case
CP22	Alphabet always Lower case
DT01	Keyboard terminator---none
DT02	Keyboard terminator---Enter
DT03	Keyboard terminator---H-TAB

H. Sleep mode function

LS00	Laser Sleep mode off
LS01	Laser Sleep time 5 second (Default)
LS02	Laser Sleep time 10 second
LS03	Laser Sleep time 15 second
LS04	Laser Sleep time 20 second
LS05	Laser Sleep time 30 second
LS06	Laser Sleep time 60 second

I. Power down mode function

MT00	Power save mode off (Default)
MT01	Power save after 5 min
MT02	Power save after 10 min
MT03	Power save after 20 min
MT04	Power save after 30 min
MT05	Power save after 60 min
MT12	Power save after every trigger scan

J. RS-232C Interface setting

BR00	Baud Rate 38400
BR01	Baud Rate 19200
BR02	Baud Rate 9600 (Default)
BR03	Baud Rate 4800
BR04	Baud Rate 2400
BR05	Baud Rate 1200
BR08	Baud Rate 57600
BR09	Baud Rate 115200
HP01	None handshaking (Default)
HP02	ACK/NAK
HP03	Xon/Xoff
HP04	RTS/CTS
PB01	Even parity
PB02	Odd parity
PB03	Mark parity
PB04	Space parity
PB05	None parity (Default)



LB07	Enable BEEPER ON<BEL> CHARACTER
LB08	Ignore BEEP ON <BEL> CHARACTER (Default)
RT01	ACK/NAK response time 300ms (Default)
RT02	ACK/NAK response time 2s
RT03	ACK/NAK response time 500ms
RT04	ACK/NAK response time 3s
RT05	ACK/NAK response time 1s
RT06	ACK/NAK response time 5s
RT07	ACK/NAK response time infinity
SB01	1 stop bit (Default)
SB02	2 stop bit
DB07	7 data bit
DB08	8 data bit (Default)
RT01	ACK/NAK response time 300ms
RT02	ACK/NAK response time 2s
RT03	ACK/NAK response time 500ms
RT04	ACK/NAK response time 3s
RT05	ACK/NAK response time 1s
RT06	ACK/NAK response time 5s
RT07	ACK/NAK response time infinity
DT11	RS-232 message terminator—none
DT12	RS-232 message terminator—CR/LF (Default)
DT13	RS-232 message terminator—CR
DT14	RS-232 message terminator—LF
DT15	RS-232 message terminator—H tab
DT16	RS-232 message terminator—STX/ETX
DT17	RS-232 message terminator—EOT

V. The Symbolgies

A. UPC/EAN/JAN

RC11	EAN convert to ISSN/ISBN enable
RD11	EAN convert to ISSN/ISBN disable (Default)
RC03	UPC/EAN/JAN enable (Default)
RD03	UPC/EAN/JAN disable
RC03	UPC/EAN/JAN enable (Default)
UE01	UPC/EAN/JAN ALL ENABLE (Default)
UE02	EAN-8 OR EAN-13 ENABLE
UE03	UPC-A AND EAN-13 ENABLE
UE04	UPC-A AND UPC-E ENABLE
UE05	UPC-A ENABEL
UE06	UPC-E ENABLE
UE07	EAN-13 ENABLE
UE08	EAN-8 ENABEL
UE09	UPC/EAN ADDon off (Default)
UE10	Addon 5 only

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UE11	Addon 2 only
UE12	Addon 2 or 5
UE13	Force UPC-E to UPC-A format enable
UE14	Force UPC-E to UPC-A format disable (Default)
UE15	Force UPC-A to EAN-13 format enable
UE16	Force UPC-A to EAN-13 format disable (Default)
UE17	Transmit UPC-A check digit enable (Default)
UE18	Transmit UPC-A check digit disable
UE19	Transmit UPC-E leading character enable (Default)
UE20	Transmit UPC-E leading character disable
UE21	Transmit UPC-E check digit enable (Default)
UE22	Transmit UPC-E check digit disable
UE23	Transmit EAN-8 check digit enable (Default)
UE24	Transmit EAN-8 check digit disable
UE25	Transmit EAN-13 check digit enable (Default)
UE26	Transmit EAN-13 check digit disable
UE27	Transmit UPC-A leading character enable (Default)
UE28	Transmit UPC-A leading character disable
UE30	Addon format with separator
UE31	Addon format without separator (Default)
UE32	EAN/UPC +addon (none mandatory) (Default)
UE33	EAN/UPC +addon (mandatory)
UE35	EAN/UPC +addon mandatory for 978/977 (bookland) Supplement requirement, not sent for other
UE38	EAN/UPC +addon mandatory for 978/977 (bookland) Supplement requirement, optionally for other
UE42	EAN/UPC +addon mandatory for 491 Japanese (bookland) Supplement requirement, not sent for other
UE43	EAN/UPC +addon mandatory 491 Japanese (bookland) Supplement requirement,optionally for other
UE44	force EAN-8 to EAN-13 format enable
UE45	force EAN-8 to EAN-13 format disable (Default)
UE60	EAN-13 first "0" can transmitted
UE61	EAN-13 first:"0" can't transmitted (Default)
UE66	EAN-13 with first 0 ID code same as "UPC-A"
UE67	EAN-13 with first 0 ID code same as "EAN-13"
DC10	UPC-A data redundant check=off
DC11	UPC-A data redundant check=1
DC12	UPC-A data redundant check=2
DC13	UPC-A data redundant check=3
DC14	UPC-E data redundant check=off
DC15	UPC-E data redundant check=1
DC16	UPC-E data redundant check=2
DC17	UPC-E data redundant check=3
DC20	EAN-13 data redundant check=off
DC21	EAN-13 data redundant check=1
DC22	EAN-13 data redundant check=2
DC23	EAN-13 data redundant check=3

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DC24	EAN-8 data redundant check=off
DC25	EAN-8 data redundant check=1
DC26	EAN-8 data redundant check=2
DC27	EAN-8 data redundant check=3

B. Code39

RC01	Code 39 enable (Default)
RD01	Code 39 disable
RC13	Code 32 enable
RD13	Code 32 disable
DC00	Code 39 data redundant check=off (Default)
DC01	Code 39 data redundant check=1
DC02	Code 39 data redundant check=2
DC03	Code 39 data redundant check=3
3901	Standard code 39 (Default)
3902	FULL ASCII code 39
3903	Code 39 start/stop character transmission
3904	Code 39 start/stop character without transmission (Default)
3905	Code 39 check digit calculate and transmit
3906	Code 39 check digit calculate but without transmit
3907	No check character (Default)
3912	Code 32 (Italian pharmacy)transmit "A" character
3913	Code 32 (Italian pharmacy)without transmit "A" character (Default)

C. ITF 2 of 5

RC04	ITF 2 of 5 enable (Default)
RD04	ITF 2 of 5 disable
RC09	IATA code enable
RD09	IATA code disable (Default)
DC80	ITF 25 data redundant check=off
DC81	ITF25 data redundant check=1 (Default)
DC82	ITF25 data redundant check=2
DC83	ITF25 data redundant check=3
IT03	ITF 2 of 5 no check character (Default)
IT04	ITF 2 of 5 check digit calculate and transmit
IT05	ITF 2 of 5 check digit calculate but without transmit

D. CODABAR

RC02	Codabar enable (Default)
RD02	Codabar disable
CB05	Codabar start/stop character transmission-----none
CB06	Codabar start/stop character transmission-----A,B,C,D (Default)
CB07	Codabar start/stop character transmission-----DC1~DC4

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CB08	Codabar start/stop character transmission-----a/t,b/n,c/*,d/e
CB13	No check character (Default)
CB14	Validate modulo 16,but don't transmit
CB15	Validate modulo 16,but transmit
DC50	Codabar data redundant check=off
DC51	Codabar data redundant check=1 (Default)
DC52	Codabar data redundant check=2
DC53	Codabar data redundant check=3

E. Code 128

RC06	Code 128 enable (Default)
RD06	Code 128 disable
RC10	EAN -128 enable
RD10	EAN-128 disable (Default)
DC40	Code 128 data redundant check=off (Default)
DC41	Code 128 data redundant check=1
DC42	Code 128 data redundant check=2
DC43	Code 128 data redundant check=3
1803	No check character
1804	Calculate but not transmit
1805	Calculate and transmit

F. Code 93

RC08	Code 93 enable (Default)
RD08	Code 93 disable
DC30	Code 93 data redundant check=off (Default)
DC31	Code 93 data redundant check=1
DC32	Code 93 data redundant check=2
DC33	Code 93 data redundant check=3
9303	Code 93 check digit calculate but without transmit (Default)
9304	Code 93 check digit not calculate and without transmit
9305	Code 93 check digit calculate and transmit

G. Chinese post code

RC05	Chinese post code enable
RD05	Chinese post code disable (Default)
DC60	Chinese post codedata redundant check=off
DC61	Chinese post code data redundant check=1 (Default)
DC62	Chinese post codedata redundant check=2
DC63	Chinese post codedata redundant check=3



H. MSI/PLESSY

RC14	MSI enable
RD14	MSI disable (Default)
DC70	MSI data redundant check= off
DC71	MSI data redundant check=1 (Default)
DC72	MSI data redundant check=2
DC73	MSI data redundant check=3
MS03	MSI/Plessy double check digit calculate but not transmit (Default)
MS04	MSI/Plessy double check digit without calculate and transmit
MS05	MSI/Plessy double check digit calculate but only first digit transmit
MS06	MSI/Plessy double check digit calculate and both transmit
MS07	MSI/Plessy single check digit calculate but without transmit
MS08	MSI/Plessy single check digit calculate and transmit

I. CODE 11

RC07	CODE 11 enable
RD07	CODE 11 disable (Default)
1103	CODE 11 one check digit verification (Default)
1104	Code 11 two check digit verification
1105	Two Check for code 11 check digit if code length is greater than 10 character
1106	Disable verification
1107	Code 11 check digit transmitted
1108	Code 11 check digit not transmitted

J. Industrial 2 of 5

RC21	Industrial 2 of 5 code enable
RD21	Industrial 2 of 5 code disable (Default)
D253	Industrial 2 of 5 code no check character (Default)
D254	Industrial 2 of 5 code check digit calculate and transmit
D255	Industrial 2 of 5 code check digit calculate but without transmit

K. Standard 2 of 5

RC22	STD 2 of 5 code enable
RD22	STD 2 of 5 code disable (Default)
D053	STD 2 of 5 code no check character (Default)
D054	STD 2 of 5 code check digit calculate and transmit
D055	STD 2 of 5 code check digit calculate but without transmit

L. Telepen

RC25	Telepen enable
RD25	Telepen disable (Default)
TE03	Telepen Numeric mode enable
TE04	AIM Telepen enable



M. GS1 DataBar (RSS-14)

RC15	GS1 Standard (RSS-14 standard) enable
RC16	GS1 DataBar Limited (RSS-limited) enable
RC17	GS1 DataBar Exoanded (RSS Expanded) enable
RD15	GS1 Standard (RSS-14 standard) disable
RD16	GS1 DataBar Limited (RSS-limited) disable
RD17	GS1 DataBar Exoanded (RSS Expanded) disable
SS00	Transmit GS1 Standard (RSS-14 standard) check digit
SS01	Do not Transmit GS1 Standard (RSS-14 standard) check digit
SS02	Transmit GS1 Standard (RSS-14 standard) application ID (01)
SS03	Do not transmit GS1 Standard (RSS-14 standard) application ID (01)
SS04	GS1 Standard (RSS-14 standard)/EAN-128 emulation disable
SS05	GS1 Standard (RSS-14 standard)/EAN-128 emulation enable
SS06	GS1 DataBar Exoanded (RSS Expanded)/EAN-128 emulation disable
SS07	GS1 DataBar Exoanded (RSS Expanded)/EAN-128 emulation enable
SS08	GS1 DataBar Exoanded (RSS Expanded) Check Digital Enable
SS09	GS1 DataBar Exoanded (RSS Expanded) Check Digital Disable
SS10	Transmit GS1 DataBar Limited (RSS-limited) check digit
SS11	Don't transmit GS1 DataBar Limited (RSS-limited) check digit
SS12	Transmit GS1 DataBar Limited (RSS-limited) application ID (01)
SS13	Do not transmit GS1 DataBar Limited (RSS-limited) application ID
SS16	Transmit GS1 DataBar Exoanded (RSS Expanded) application ID (01)
SS17	Do not transmit GS1 DataBar Exoanded (RSS Expanded) application ID

VI. Data Editing

IS00	Disable identifier code
IS01	Enable identifier code table as ZEBEX standard
CP11	Add code length as header enable(all barcode)
CP12	Add code length as header disable (all barcode)
HT01	Header (Preamble)
HT02	Trailer (Postamble)
HT03	Truncate header character
HT04	Truncate trailer character
IC00	Inter character delay 5ms
IC01	Inter character delay 0ms (Default)
IC02	Inter character delay 10ms
IC03	Inter character delay 20ms
IC04	Inter character delay 50ms
IC05	Inter character delay 2ms
IC06	Inter character delay 100 msec
IC07	Inter character delay 90 msec
IM01	Inter message delay 0 ms (Default)
IM02	Inter message delay 100 ms
IM03	Inter message delay 500 ms
IM04	Inter message delay 1000 ms



VII. Flash Memory Configuration

The total of flash memory of configuration is 250 in Z-5130, since not all of them is meaningful for users, we will only explain what the users may be interested.

Address (name)	Length	Description	Default
02H (EAN_FLAG)	1	Bit 0 = 1 ---> Read EAN-13 Enable = 0 ---> Disable Bit 1 = 1 ---> Read EAN-8 Enable = 0 ---> Disable Bit 2 = 1 ---> Read EAN Add 2 = 0 ---> Disable Bit 3 = 1 ---> Read EAN Add 5 = 0 ---> Disable Bit 5 = 1 ---> Send EAN-13 Check digit = 0 ---> No Send Bit 7 = 1 ---> Send EAN-8 Check digit = 0 ---> No Send	A3H
03H(UPC_FLAG)	1	Bit 0 = 1 ---> Read UPC-A Enable = 0 ---> Disable Bit 1 = 1 ---> Read UPC-E Enable = 0 ---> Disable Bit 2 = 1 ---> Read UPC Add 2 = 0 ---> Disable Bit 3 = 1 ---> Read UPC Add 5 = 0 ---> Disable Bit 4 = 1 ---> Send UPC-A Leading 0 = 0 ---> No Send Bit 5 = 1 ---> Send UPC-A Check digit = 0 ---> No Send	F3H

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		Bit 6 = 1 ---> Send UPC-E Leading 0 = 0 ---> No Send Bit 7 = 1 ---> Send UPC-E Check digit = 0 ---> No Send	
04H	1	Bit 0 = 1 ---> UPC-E to UPC-A Enable = 0 ---> Disable Bit 1 = 1 ---> UPCA to EAN13 Format = 0 ---> No Bit 2 = 1 ---> ISBN/ISSN Conversion = 0 ---> No	80H
05H (C39_FLAG)	1	Bit 0 = 1 ---> Read Code 39 Enable = 0 ---> Disable Bit 1 = 1 ---> Send Start/Stop character = 0 ---> No Send Bit 2 = 1 ---> Check digit Verification Enable = 0 ---> Disable Bit 3 = 1 ---> Send Check digit = 0 ---> No Send Bit 4 = 1 ---> Enable Full Code 39 = 0 ---> Disable Full Code 39 Bit 5 = 1 ---> ITPR Conversion (Code 32) = 0 ---> No Bit 6 = 1 ---> ITPR Transmit "A" Character = 0 ---> No Bit 7 = 1 ---> Concatenation Enable = 0 ---> Disable	01H
06H (C39_MIN)	1	Code 39 → Min. Code Length	03H
07H (C39_MAX)	1	Code 39 → Max. Code Length	3EH
08H (CDB_FLAG)	1	Bit 0 = 1 ---> Read Codabar Enable = 0 ---> Disable Bit 1 = 1 ---> Send Start/Stop character = 0 ---> No Send Bit 2 = 1 ---> Send Check digit = 0 ---> No Send Bit 3 = 1 ---> Check digit Verification Enable	63H

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		= 0 ---> Disable Bit 4-7 Start/Stop Type 0110B(06H): A,B,C,D 0111B(07H):DC1-DC4 1000B(08H):a/t,b/n,c/*,d/e	
09H (CDB_MIN)	1	Codabar → Min. Code Length	06H
0AH (CDB_MAX)	1	Codabar → Max. Code Length	20H
0BH (I25_FLAG)	1	Bit 0 = 1 ---> Read I 2 OF 5 Enable = 0 ---> Disable Bit 6 = 1 ---> Send Check digit = 0 ---> No Send Bit 7 = 1 ---> Check digit Verification Enable = 0 ---> Disable	01H
0CH (I25_MIN)	1	Interleave 2 of 5 → Min. Code Length	04H
0DH (I25_MAX)	1	Interleave 2 of 5 → Max. Code Length	20H
0EH	1	Interleave 2 of 5 →FIX_Length1_Default	00H
0FH	1	Interleave 2 of 5 →FIX_Length2_Default	00H
10H (C128_FLAG)	1	Bit 0 = 1 ---> Read CODE 128 Enable = 0 ---> Disable Bit 4 = 1 ---> FNC 2 Enable = 0 ---> disable Bit 6 = 1 ---> Check digit Enable = 0 ---> Disable Bit 7 = 1 ---> Send Check digit = 0 ---> No Send	41H
11H (C128_MIN)	1	CODE 128 → Min. Code Length	03H
12H (C128_MAX)	1	CODE 128 → Max. Code Length	3EH
13H (C93_FLAG)	1	Bit 0 = 1 ---> Read CODE 93 Enable = 0 ---> Disable Bit 2 = 1 ---> Check digit Enable = 0 ---> Disable	05H
14H (C93_MIN)	1	CODE 93 → Min. Code Length	03H
15H (C93_MAX)	1	CODE 93 → Max. Code Length	3EH
16H(CP25_FLAG)	1	Bit 0 = 1 ---> Read Chinese Post Code Enable	00H



		= 0 ---> Disable	
17H (CP25_MIN)	1	CP25 → Min. Code Length	0AH
18H (CP25_MAX)	1	CP25 → Max. Code Length	10H
19H(MSI_FLAG)	1	Bit 0 = 1 ---> Read MSI Enable = 0 ---> Disable Bit 7 = 1 ---> Check digit Enable = 0 ---> Disable	82H
1AH (MSI_MIN)	1	MSI → Min. Code Length	04H
1BH (MSI_MAX)	1	MSI → Max. Code Length	20H
1CH	1	MSI_SOFT_FLAG	18H
1DH(S25_FLAG)	1	Bit 0 = 1 ---> Read IATA Enable = 0 ---> Disable Bit 1 = 1 ---> Read Standard 2 OF 5 Enable = 0 ---> Disable Bit 6 = 1 ---> Send Check digit = 0 ---> No Send Bit 7 = 1 ---> Check digit Verification Enable = 0 ---> Disable	00H
1EH (S25_MIN)	1	Standard 2 of 5 → Min. Code Length	06H
1FH (S25_MAX)	1	Standard 2 of 5 → Max. Code Length	20H
20H(D25_FLAG)	1	Bit 0 = 1 ---> Read Industry 2 OF 5 Enable = 0 ---> Disable Bit 6 = 1 ---> Send Check digit = 0 ---> No Send Bit 7 = 1 ---> Check digit Verification Enable = 0 ---> Disable	00H
21H (D25_MIN)	1	Industry 2 of 5 → Min. Code Length	06H
22H (D25_MAX)	1	Industry 2 of 5 → Max. Code Length	20H
23H	1	RSS_Flag	98H



		Bit 0 =1 RSS14 Enable =0 RSS14 Disable Bit 1 =1 RSS14 Limited Enable =0 RSS14 Limited Disable Bit 2 =1 RSS14 Expanded Enable =0 RSS14 Expanded Disable	
24H	1	RSS_Flag_X1	B3H
25H (RSSE_MAX)	1	RSS14E_FLAG→ Min. Code Length	06H
26H (RSSE_MAX)	1	RSS14E_FLAG→Max. Code Length	30H
27H	1	RSS_STACK_SearchTime	03H
28H	1	Reserved	00H
2AH (C11_FLAG)	1	C11_FLAG_X	04H
2BH (C11_MAX)	1	C11→ Min. Code Length	06H
2CH (C11_MIN)	1	C11→ Max. Code Length	20H
30H	1	TEL_FLAG_X	00H
31H (TEL_MIN)	1	TEL → Min. Code Length	04H
32H (TEL_MAX)	1	TEL → Max. Code Length	20H
6EH (Code Identifiers)	1	Identifier Enable(0-1) 0: Disable Identifier function 1: Enable identifier function	00H
6FH(C39 ID length)	1	Length of Code39 ID (must be <3)	01H
70H-71H(C39 ID)	2	Code 39 ID String	“M”
72H(I25 ID length)	1	Length of I25 ID (must be <3)	01H
73H-74H(I25 ID)	2	ITF 25 ID String	“I”
75H(CP25 ID length)	1	Length of CP25 ID (must be <3)	01H
76H-77H(CP25 ID)	2	Chinese Post Code ID String	“H”
78H(UPC-E ID length)	1	Length of UPC-E ID (must be <3)	01H
79H-7AH(UPC-E ID)	2	UPC-E ID String	“E”
7BH(UPC-A ID length)	1	Length of UPC-A ID (must be <3)	01H
7CH-7DH(UPC-A ID)	2	UPC-A ID String	“A”
7EH(EAN ID length)	1	Length of EAN-13 ID (must be <3)	01H
7FH-80H(EAN ID)	2	EAN-13 ID String	“F”
81H(EAN-8 ID length)	1	Length of EAN-8 ID (must be <3)	02H
82H-83H(EAN-8 ID)	2	EAN-8 ID String	“FF”
84H(CDB ID length)	1	Length of Codabar ID (must be <3)	01H
85H-86H(CDB ID)	2	Codabar ID String	“N”
87H(C128 ID length)	1	Length of Code 128 ID (must be <3)	01H
88H-89H(C128 ID)	2	Code 128 ID String	“K”

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8AH(C93 ID length)	1	Length of Code 93 ID (must be <3)	01H
8BH-8CH(C93 ID)	2	Code 93 ID String	“L”
8DH(MSI ID length)	1	Length of MSI ID (must be <3)	01H
8EH-8FH(MSI ID)	2	MSI ID String	“P”
90H(S25 ID length)	1	Length of Standard 2 of 5 ID (must be <3)	01H
91H-92H(S25 ID)	2	Standard 2 of 5 ID String	“S”
93H(D25 ID length)	1	Length of Industry 2 of 5 ID (must be <3)	01H
94H-95H(D25 ID)	2	Industry 2 of 5 ID String	“D”
96H(C11 ID length)	1	Length of C11 ID	01H
97H-98H	2	C11 ID String	“O”
9CH	1	Length of RSS14_ID	02H
9DH-9EH	2	RSS14 ID String	“RS”
9FH	1	Length of RSS14L_ID	02H
A0H-A1H	2	RSS14L ID String	“RL”
A2H	1	Length of RSS14E ID	02H
A3H-A4H	2	RSS14E ID String	“RX”
A5H	1	Length of TELEPEN ID	01
A6H-A7H	2	TELEPEN ID String	“T”
A8H-ABH	4	Reserved	00H
BEH	1	Length of Truncate header character	00H
BFH	1	Length of Truncate trailer character	00H
C8H	1	Reserved (do not use)	00H
C9H-D2H	10	Data of Preamble	00H
D3H	1	Reserved	00H
D4H	1	Length of Postamble	00H
D5H-DEH	10	Data of Postamble	00H
DFH-EAH	12	Reserved	XX
EBH	1	Length of Preamble	00H

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