

# BARCODE SCANNER MODULE (D) CONFIGURATION MANUAL



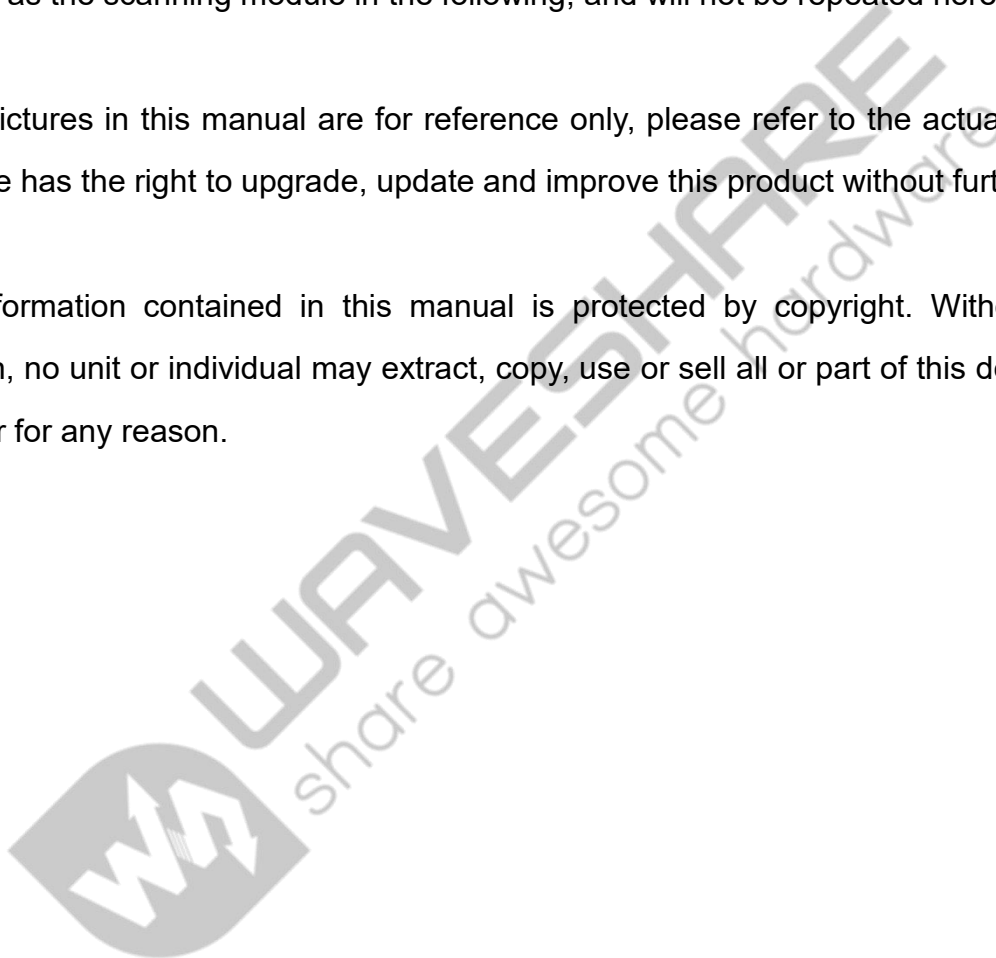
## STATEMENT

Please read all the contents of this manual carefully before using the products described in this manual to ensure the safe and effective use of the products.

For the convenience of writing, the Barcode Scanner Module (D) will be collectively referred to as the scanning module in the following, and will not be repeated here.

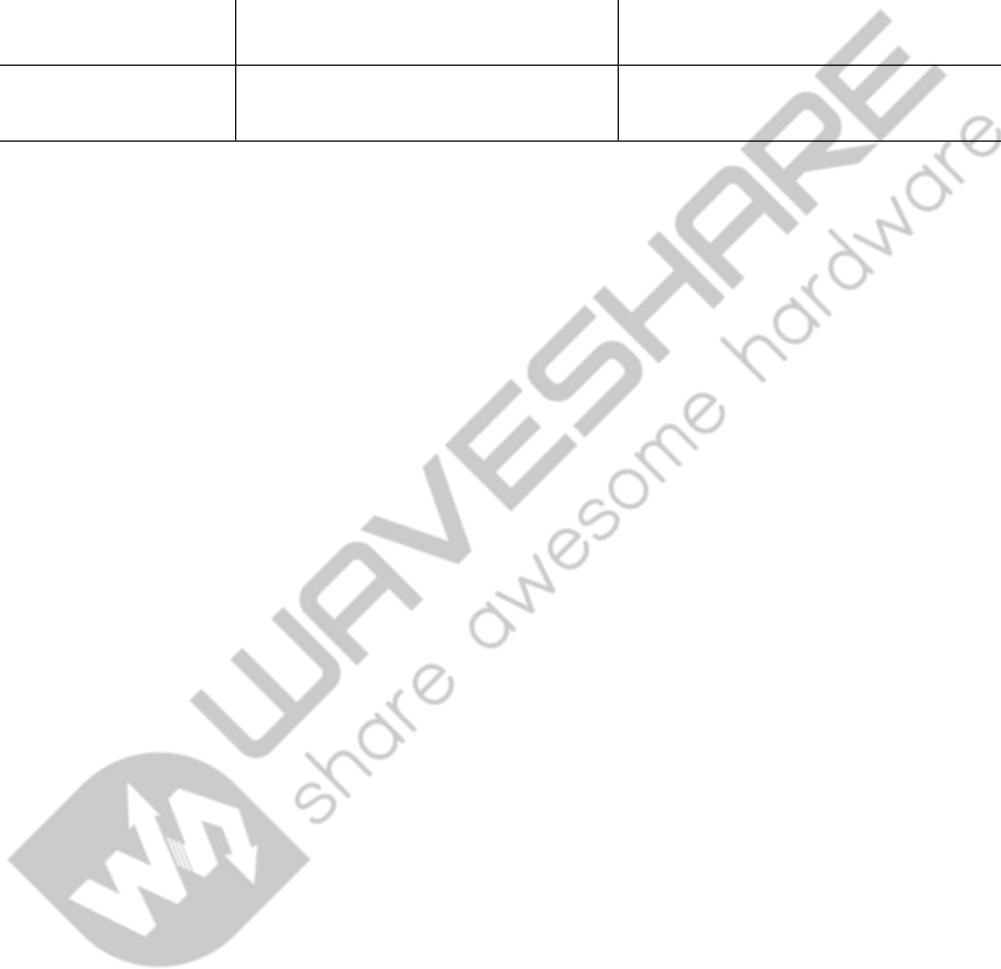
The pictures in this manual are for reference only, please refer to the actual products. Waveshare has the right to upgrade, update and improve this product without further notice.

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## Revision History

Version	Date	Remarks
1.0	2023/09/05	Initial version



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## CHAPTER I USAGE REQUIREMENTS

**Electrostatic protection**

Attention should be paid to anti-static measures during unpacking and use, such as using grounding wristband and grounding the work area.

**Heat dissipation considerations**

The scanning module will emit heat during operation, and the heat will accumulate to a certain extent when it works continuously at full speed for a long time. Although the code scanning module can adapt to work in high temperature environment, it will increase image noise and reduce image quality and reading performance in high temperature environment. Considering the actual use environment, users should consider whether appropriate heat dissipation design is necessary.

- During design, it should be considered to reserve a space for the code scanning module to form natural convection or forced convection.
- Avoid using rubber and other heat insulation materials to wrap the scanning module.

**Ripple Noise**

Since the power input of the scanning module is directly supplied to the image sensor and the decoding chip, in order to ensure stable operation, please use the power input with low ripple noise, and ensure that it does not exceed 50mV (peak -to -peak).

## CHAPTER II CONFIGURATION CODE SETTING

In most cases, the factory default setting of the scanning module can meet the needs of users to put it into use directly. You can also set the parameters by setting the code according to the actual use needs.

### 1. OPERATION SETTING

#### 1.1 CONFIGURATION CODE USAGE

Read the "Enable configuration code" to configure the function of the scanning module (setting code function). After the function is enabled, the parameters of the scanning module can be modified by reading one or more setting codes. After reading the "Disable configuration code", the scanning module will exit the configuration state.



\*Enable configuration code



Disable configuration code

- Note: The option marked with (\*) in the configuration code indicates the default function or parameters.

#### 1.2 RESTORE FACTORY SETTING

After reading this configuration code, the current parameter setting will be lost and the default value will be restored. See Appendix C for the factory default parameters and functions.



Restore factory setting

- Note: Please use the "Restore Factory Defaults" function with caution.

### 1.3 USER DEFAULT CONFIGURATION

In addition to restoring factory settings, users can save common settings as user default settings. By reading "Save current settings as user default settings", the current equipment configuration can be saved as user default information, so as to make quick settings when necessary.

By reading "Restore User Default Settings", you can restore the default settings saved by users.



Save current settings  
as user default settings



Restore User Default Settings

## 2. COMMUNICATION MODE

The scanning module only supports UART -TTL serial output mode. Users can set serial port parameters by scanning setting code.

### 2.1 BAUDRATE

The unit of Baud Rate is bps (bps: Bits per second), you can read the following setting code to select the configuration parameters.



1200bps



4800bps



\*9600bps



14400bps



19200bps



38400bps



57600bps



115200bps

---

## 2.2 VERIFICATION METHOD

There are three verification methods that can be selected, as follows:



\*None



Odd



Even



### 3. READING MODE

The scanning module supports continuous and sensing modes.

#### 3.1 CONTINUOUS MODE

Continuous mode is a working mode in which the scanning module continuously and circularly shoots, reads and outputs information. In this mode, by default, it will enter the reading interval of 1000ms after successful reading.



Continuous mode

##### 3.1.1 Single mode reading time

In the continuous reading mode, this parameter refers to the maximum time allowed for the code scanning module to continuously collect and identify before the reading is successful. After successful reading or overtime reading, the scanning module will enter the interval of not collecting reading. The setting range of single code reading time is 0.1~25.5 seconds, and the step length is 0.1 seconds; When set to 0, it means that the code reading time is infinite. The default duration is infinite.



1000ms



3000ms



\*5000ms



Infinite length

### 3.1.2 Reading interval length

Refers to the interval time required for the next reading after successful reading. In this interval, no acquisition and reading are carried out. Read the following setting codes to set the reading interval. Setting range: 0ms ~ 25500ms, default duration: 1000ms.



No interval



200ms



500ms



\*1000ms



3000ms



5000ms

### 3.1.3 Same code read delay

To prevent the same barcode from being consecutively read multiple times in continuous mode, you can require the scanning module to allow reading the same barcode only after a set delay duration. Same Code Read Delay refers to not reading the same code again within the set time duration after reading it once.



Enable same code reading delay



Disable same code reading delay

Only after the specified duration has elapsed can it be recognized and output. The same code reading delay is disabled by default. To configure the duration of the same code read delay, you can scan the following setup code. Setting range: 0ms ~ 12700ms.

- Note: You need to scan "Enable same code reading delay" before setting the delay duration.



Infinite delay



500ms



1000ms



3000ms



5000ms

---

## 3.2 SENSING MODE

Sensing mode refers to a working mode in which the scanning module enters the reading mode by sensing the brightness change of the surrounding environment. When the scene changes, the scanning module begins to read. After the output information is successfully read or the single code reading time is overtime, the code scanning module needs a certain time interval (which can be set) to re-enter the monitoring state. If the following situations do not occur, the code scanning module will work circularly in the above manner: if the barcode is not scanned within a single code reading time, the code scanning module will automatically suspend code reading and enter the monitoring state.



Sensing mode

### 3.2.1 Single code reading time

Please refer to section 3.1.1. Setting the length of single code reading for setting.

### 3.2.2 Reading interval

Please refer to section 3.1.2. Reading Interval Time Setting Code for setting.

### 3.2.3 Same code reading delay

Please refer to section 3.1.3. Setting the code reading delay for setting.

### 3.2.4 Sensitivity

Sensitivity refers to the degree of change in the detection scene in the sensing mode. When the code scanning module judges that the degree of scene change meets the requirements, it will switch from the monitoring state to the reading state.



Low sensitivity



\*General sensitivity



High sensitivity



Ultra high sensitivity

### 3.2.5 Image stabilization duration

The image stabilization time refers to the time when the scanning code module that detects the scene change needs to wait for the image stabilization before reading the code in the sensing mode. The setting range of image stabilization time is 0~25500 ms, and the step size is 100ms. The default image stabilization time is 0 ms.



\*0ms



100ms



400ms



1000ms



2000ms



## 4. OUTPUT PROMPT

### 4.1 IMAGE STABILIZATION DURATION

Users can quickly obtain the current equipment version information by reading the following setting codes.



Read device version



## 5. DATA EDITING

In practical application, in order to facilitate data processing, it is sometimes necessary to edit the reading data before outputting it. Data editing package includes:

- Add a Prefix.
- Add a Suffix.
- Data segment interception of decoded data.
- Output barcode Code ID.
- Decoding failure characteristic output information (RF information).
- Add a Tail.

Format of processed output data:

**【Prefix】 【Code ID】 【Data】 【Suffix】 【Tail】**

### 5.1 PREFIX

Prefix is a user-defined string before decoding data. Users can add and modify prefixes by reading the following setting codes.



Allow adding prefixes



Adding prefixes not allowed

Read the following setting codes, and cooperate with the “data code” setting code and “save” setting code, user can modify the prefix content.





Modify prefix

- Note: The prefix can be up to 15 characters, and each prefix character is represented by two hexadecimal values. Refer to Appendix F for the hexadecimal conversion table of character values.

## 5.2 SUFFIX

Suffix is a user-defined string after decoding data. Users can add and modify suffixes by reading the following setting codes.



Allow adding suffix



Adding suffix not allowed

Read the following setting codes, and with the "data code" configuration code and "save" configuration code, users can modify the suffix content.



Modify suffix

- Note: Suffixes can be up to 15 characters, and each suffix character is represented by two hexadecimal values. Refer to Appendix F for the hexadecimal conversion table of character values.

### 5.3 CODE ID

#### 5.3.1 Code ID

Code ID uses one character. Users can add Code ID by reading the following setting codes to identify different barcode types.



Allow adding Code ID



\* Code ID not allowed

Read the following setting code to restore the default Code ID value of barcode. See appendix E for the default list.



Restore Code ID default value

#### 5.3.2 Modify Code ID

Users can modify the Code ID of each barcode by scanning the following setting code.



Modify Code 128 CODEID



Modify Code 39 CODEID



Modify QR Code CODEID

---

## 5.4 TAIL



Disable Tail



\*Add CR Tail (0x0D)



Add TAB Tail (0x09)



Add CRLF Tail (0x0D 0x0A)

---

## 5.5 SEGMENT

### 5.5.1 DATA segment truncation

This function is used in scenarios where users need to output partially decoded information.

Decoding information data includes: [start] [center] [end]

Users can select some information to be output by reading the following setting codes.



Transmit the entire data



Only transmit Start segment



Only transmit End segments



Only transmit Center segment

### 5.5.2 DATA segment length modification

Users can modify the length of the Start segment and the length of the End segment by reading the following setting codes in combination with the "data code" and "save" setting codes. Both the Start segment and the End segment are allowed up to 255 characters, and the length of both segments is expressed by a hexadecimal character. Refer to Appendix F for the hexadecimal conversion table corresponding to characters.



Modify the Start segment length



Modify the End segment length

---

### 5.6 RF INFORMATION

Read Fail (RF) information refers to the information output when the scanning module fails to read, so that users or demos can make corresponding adjustments or operations after detecting this information. Users can freely define RF information.

Read the following setting code to enable/disable RF information transmission.



Enable RF information sending



\* Disable RF information sending

Read the following setting codes, and combine the "data code" and "save" setting codes to define and modify the RF information content by yourself. Each RF character is represented by two hexadecimal values, with a maximum of 15 characters allowed. Refer to Appendix F for the hexadecimal conversion table corresponding to characters.



Modify RF information

- Note: When an odd number of hexadecimal values are input, the last bit setting fails, and only the first few characters are output.

## 5.7 OUTPUT PROTOCOL

Users can modify the output format of decoding results in UART mode by reading the following setting codes. The decoding result format for the output with protocol: <03> <length> <decoded data>.



\*Only data output



Output with protocol

## 6. CODE SYSTEM SETTING

### 6.1 SHORTCUT GLOBAL OPERATION

#### 6.1.1 Global operation

By reading the following setting codes, users can globally enable/disable the reading of all supported codes and enable the default reading types. After reading all types of codes is disabled, only the reading setting code is enabled.



Allow reading all types



Reading all types not allowed



\*Enable the default reading types

#### 6.1.2 ENABLE OUTPUT OF PRODUCT CODE CHECK BIT

Users can enable/disable the output of the product barcode check bit by scanning the following setup code. (Product barcodes include: EAN13/EAN8/UPC -A/UPC -E0/UPC-E1).



\*Allow output of product code check bit



Disable output of product code check bit

---

## 6.2 1D CODE OPERATION

### 6.2.1 CODE 128

Users can enable or disable the Code128 barcode scanning function by scanning the following setup code.



\* Allow Code 128 to read



Code 128 to read not allowed

### 6.2.2 CODE 39

The user can scan the following setting codes to enable and disable Code39 reading function.



\* Enable Code 39 reading



Disable CODE39 Reading

---

## 6.3 QR CODE

Users can read the following setting codes to enable and disable QR Code reading function.



\*Enable QR reading



Disable QR reading

## 7. SAVE & DELETE

### 7.1 SAVE

After reading the "Data Code", you need to scan the "Save" setting code to save the data.



Save

### 7.2 DELETE

When there is an error in reading data, you can scan the following setting codes to cancel the current setting, cancel one bit of data read before and cancel a string of data read before.



Delete the last read character



Delete the previously read data string



Delete the current setting

- Note: Cancel the current setting, and all the data codes read before will be deleted. After cancellation, you need to set it again.



8. APPENDIX

APPENDIX A: DATA CODE

0~9



0



1



2



3



4



5



6



7



8



9

A~F



A



B



C



D



E



F

---

## APPENDIX B: PARAMETER SETTING EXAMPLE

### Example 1: Modify the prefix as DATA.

1. Query the character table to obtain the hexadecimal value corresponding to the four characters of "DATA": "44", "41", "54", "41".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step).
3. Scan the "Modify Prefix" setting code.
4. Scan the data codes "4", "4", "4", "1", "5", "4", "4" and "1" in turn.
5. Scan the "Save" setting code.

**Example 2: Modify suffix to DATA.**

1. Query the character table to obtain the hexadecimal value corresponding to the four characters of "DATA": "44", "41", "54", "41".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)
3. Scan the "modify suffix" setting code.
4. Scan the data codes "4", "4", "4", "1", "5", "4", "4" and "1" in turn.
5. Scan the "Save" setting code.

**Example 3: Modify the CODE ID of EAN13 to "A"**

1. Query the character table to obtain the hexadecimal value corresponding to the "A" character: "41".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)
3. Scan the setting code of "Modify EAN13 CODE ID".
4. Scan the data codes "4" and "1" in turn.
5. Scan the "Save" setting code.

**Example 4:**

[Only transmit Start segment] When the decoding information is "1234567890ABC", the first 10 bytes "1234567890" are output.

1. Query the character table to obtain the hexadecimal value corresponding to the "10" character: "0A".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)

3. Scan the setting code of "Modify the length of Start segment".
4. Scan the data codes "0" and "A" in turn.
5. Scan the "Save" setting code.
6. Scan the setting code of "Only transmit Start segment"

**Example 5:**

[Only transmit End segment] When the decoding information is "1234567890ABC", the first 10 bytes "1234567890" are output.

1. Query the character table to obtain the hexadecimal value corresponding to the "10" character: "0A".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)
3. Scan the setting code of "Modify the length of End segment"
4. Scan the data codes "0" and "A" in turn.
5. Scan the "Save" setting code.
6. Scan the setting code of "Only transmit End segment"

**Example 6:**

[Only transmit the Center segment] When the decoding information is "1234567890ABC1234567890", the middle three bytes "ABC" are output.

1. Query the character table to obtain the hexadecimal value corresponding to the "10" character: "0A".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)

3. Scan the setting code of "Modify the length of End segment".
4. Scan the data codes "0" and "A" in turn.
5. Scan the "Save" setting code.
6. Scan the setting code of "Modify the length of Start segment".
7. Scan the data codes "0" and "A" in turn.
8. Scan the "Save" setting code.
9. Scan the setting code of "Only transmit the Center segment".

#### Example 7: Modify RF information to "FAIL"

1. Query the character table to obtain the hexadecimal value corresponding to the "FAIL" character: "46" "41" "49" "4C".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step.)
3. Scan the "Modify RF information" configuration code.
4. Scan the data codes "4" "6" "4" "1" "4" "9" "4" and "C" in turn.
5. Scan the "Save" setting code.

#### Example 8: Modify GS as "D"

1. Query the character table to get the hexadecimal value corresponding to the "D" character: "44".
2. Scan the "Enable configuration code"; (If enabled, you can skip this step).
3. Scan the "Enable GS Character Replacement" setting code (If enabled, you can skip this step).

4. Scan the "GS Replacement Character Modification" setting code.
5. Scan the data codes "4" and "4" in turn.
6. Scan the "Save" setting code.

**APPENDIX C: TACIT SETTING TABLE**

Parameter	Default Setting		Remarks
Setting code			
Setting code function	Enable		
Communication Setting			
TTL-232	Serial port baud rate	9600bps	
	Serial parity bit	No parity bit	
	Serial data bit	8-bit	
	Serial stop bit	1 bit	
	Hardware flow control	None	
Scanning mode parameters			
Continuous mode	Reading interval	1000ms	Range: 0-25500ms Step size: 100ms
	Same code reading delay	No delay	Delay duration range: 100ms-25500ms Step size: 100ms 0x00: Infinite delay
	Single code reading time	5000ms	Range: 100ms-25500ms Step size: 100ms 0x00: Infinite length
Sensing mode	Single code reading time	5000ms	Range: 100-2550ms Step size: 100ms 0x00: Infinite length
	Reading interval time	1000ms	Range: 0-25500ms Step size: 100ms
	Same code reading delay	No delay	Delay duration range: 100ms-25500ms Step size: 100ms 0x00: Infinite delay
	Sensitivity	Ordinary sensitivity	Sensitivity parameter 1/2:00-FF The greater the

			parameter value, the lower the sensitivity
	Image stabilization time	0ms	Range: 0-25500ms Step size: 100ms
<b>Data editing</b>			
	Prefix	Not added	
	Suffix	Not added	
	CODE ID	Not added	
	Tail	CR (0x0D)	
	Data segment interception	Transmit the whole data length	
	RF information	No sending	
	Output protocol	Only data output	
	Website code reading	Allow	
<b>Code system setting</b>			
<b>EAN-13</b>			
	Read	allow	
	Forced output additional code	Not required	
	2-bit additional code	Disable	
	5-bit additional code	Disable	
<b>EAN-8</b>			
	Read	Allow	
	Forced output additional code	Not required	
	2-bit additional code	Disable	
	5-bit additional code	Disable	
<b>UPC-A</b>			
	Read	Allow	
	Forced output additional code	Not required	
	2-bit additional code	Disable	
	5-bit additional code	Disable	
	UPC -A to EAN13	Disable	
<b>UPC-E0</b>			
	Read	Allow	
	Forced output additional code	Not required	
	2-bit additional code	Disable	
	5-bit additional code	Disable	
<b>UPC-E1</b>			
	Read	Allow	
	Forced output additional code	Not required	
	2-bit additional code	Disable	

5-bit additional code	Disable	
Code128		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
Code 39		
Read	Allow	
Minimum information length	4	
Maximum information length	32	
Start character	Not output	
End character	Not output	
Code 32	Disabled	
Code 32 prefix output	Output	Prerequisite: Code32 enabled
FullAsc mode	Disable	
Code 93		
Read	Allow	
Minimum information length	4	
Maximum information length	32	
CodaBar		
Read	Allow	
Minimum information length	4	
Maximum information length	32	
Start-stop character	Not output	
Interleaved 2 of 5		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
Industrial 25		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
Matrix 2 of 5		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
Parity Format	None	
Code11		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
Parity	1bit	



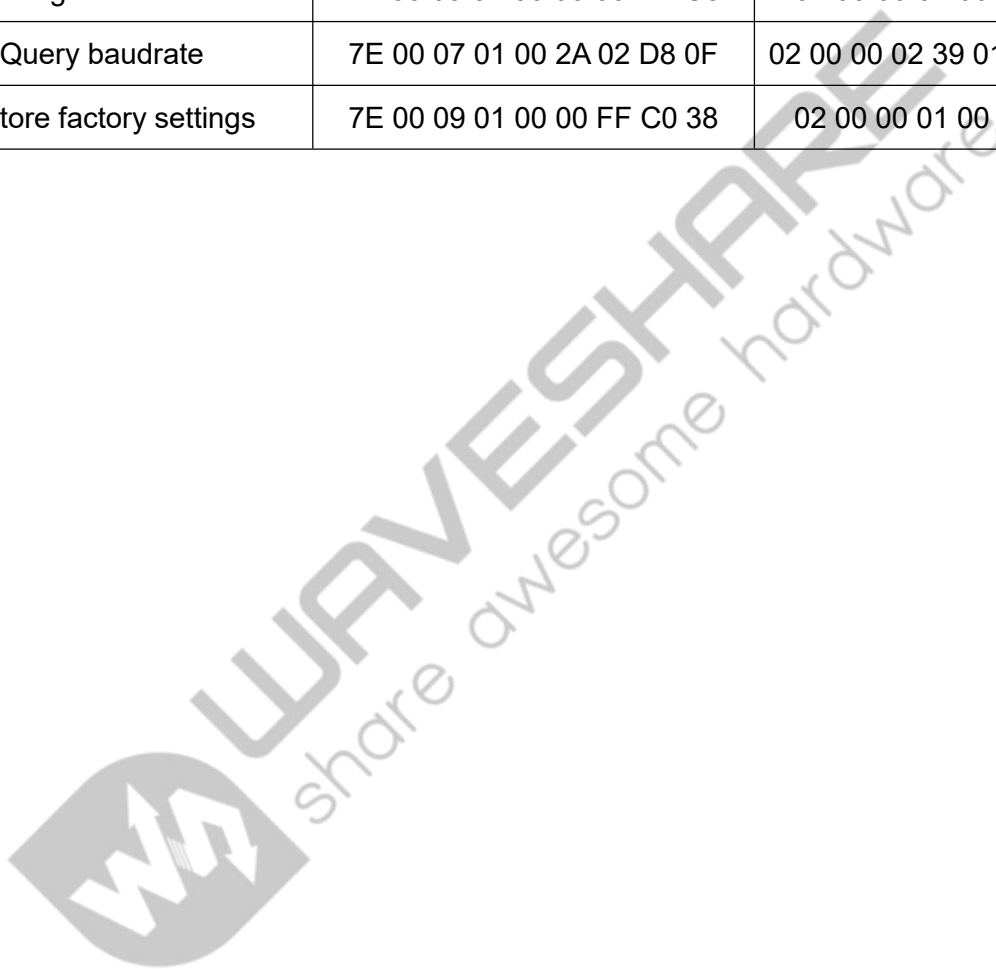
MSI		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
RSS-14		
Read	Disable	
Restricted RSS		
Read	Disable	
Minimum information length	4	
Maximum information length	32	
QR Code		
Read	Allow	
PDF417		
Read	Allow	
Data Matrix		
Read	Allow	
Simultaneously Read multiple DM barcodes	Disable	



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**APPENDIX D: COMMON UART COMMANDS**

Function	UART Command	Return Command
Set the baud rate to 9600	7E 00 08 02 00 2A 39 01 A7 EA	02 00 00 01 00 33 31
Save settings to internal Flash	7E 00 09 01 00 00 00 DE C8	02 00 00 01 00 33 31
Query baudrate	7E 00 07 01 00 2A 02 D8 0F	02 00 00 02 39 01 C1 4C
Restore factory settings	7E 00 09 01 00 00 FF C0 38	02 00 00 01 00 33 31



## APPENDIX E: CODE ID LIST

Barcode Type	Corresponding Character	Flag bit address
Code 128	j	0x96
Code 39	b	0x97
QR code	Q	0xA2



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**APPENDIX F: ASCII CODE TABLE**

Hexadecimal	Decimal	Character
00	0	NUL (Null char.)
01	1	SOH (Start of Header)
02	2	STX (Start of Text)
03	3	ETX (End of Text)
04	4	EOT (End of Transmission)
05	5	ENQ (Enquiry)
06	6	ACK (Acknowledgment)
07	7	BEL (Bell)
08	8	BS (Backspace)
09	9	HT (Horizontal Tab)
0a	10	LF (Line Feed)
0b	11	VT (Vertical Tab)
0c	12	FF (Form Feed)
0d	13	CR (Carriage Return)
0e	14	SO (Shift Out)
0f	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)

17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)
1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)
1e	30	RS (Request to Send)
1f	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	\$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	( (Left / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1

32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi -colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L

4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[ (Left / Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right / Closing Bracket)
5e	94	^ (Caret / Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g

68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	4b
70	112	4c
71	113	4d
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	(Vertical Bar)
7d	125	} (Right/Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)



APPENDIX G: BATCH SETUP COMMAND PARAMETER LIST

Setting code function	Command Parameter	Remarks
Enable configuration code	00000000	If the configuration code is disabled, it must be enabled first.
TTL-232 UART Mode	01000000	
1200bps	010209C4	
4800bps	01020271	
9600bps	01020139	
14400bps	010200D0	
19200bps	0102009C	
38400bps	0102004E	
57600bps	01020034	
115200bps	0102001A	
NONE	01030000	
ODD	01030001	
EVEN	01030002	
Single code reading time -1000ms	0202000A	The last two digits of the parameter can be modified for other durations.
Single code reading time -3000ms	0202001E	
Single code reading time -5000ms	02020032	
Single code reading time-infinite length	02020000	
Continuous mode	02000002	
Reading interval-no interval	02050000	The last two digits of the parameter can be modified for other durations.
Reading interval -500ms	02050005	
Reading interval -1000ms	0205000A	
Reading interval -3000ms	0205001E	
Reading interval -5000ms	02050032	

Same code reading delay disabled	02060000	Duration parameter setting must be turned on first Same Read Delay
Same code reading delay enabled	02060001	
Same code reading delay time-infinite delay	02070000	The last two digits of the parameter can be modified for other durations.
Same code reading delay time -500ms	02070005	
Same code reading delay time-1000ms	0207000A	
Same code reading delay time -3000ms	0207001E	
Same code reading delay time -5000ms	02070032	
Sensing mode	02000003	
Ordinary sensitivity	0209640A	
Low sensitivity	020932A0	
High sensitivity	0209320A	
Ultra high sensitivity	02093205	
Image stabilization time -0ms	02080000	The last two digits of the parameter can be modified for other durations.
Image stabilization time-100ms	02080001	
Image stabilization time -400ms	02080004	
Image stabilization time-1000ms	0208000A	

Image stabilization time -2000ms	02080014	
Duration of prompt tone for successful reading -30ms	0404011E	The last two digits of the parameter can be modified for other durations.
Duration of prompt tone for successful reading -60ms	0404013C	
Duration of prompt tone for successful reading -90ms	0404015A	
Duration of prompt tone for successful reading -120ms	04040178	
Prefixes adding enabled	05000000	
Prefixes adding disabled	05000001	
Modify prefix	05000002	
Suffixes adding enabled	05010000	
Suffixes adding disabled	05010001	
Modify suffix	05010002	
Adding CODEID enabled	05020000	
Adding CODEID disabled	05020001	
Restore CODEID default value	05020002	
Modify EAN13 CODEID	05030000	
Modify EAN8 CODEID	05030001	
Modify UPCA CODEID	05030002	
Modify UPCE0 CODEID	05030003	

Modify UPCE1 CODEID	05030004	
Modify CODE128 CODEID	05030005	
Modify CODE39 CODEID	05030006	
Modify CODE93 CODEID	05030007	
Modify CodaBar CODEID	05030008	
Modify Interleaved 2 of 5 CODEID	05030009	
Modify Industrial 25 CODEID	0503000A	
Modify Matrix 2 of 5 CODEID	0503000B	
Modify CODE11 CODEID	0503000C	
Modify MSI CODEID	0503000D	
Modify RSS CODEID	0503000E	
Modify the CODEID of finite RSS	05030010	
Modify the CODEID of extended RSS	05030011	
Modify the CODEID of QRCODE.	05030012	
Modify the CODEID of DataMatrix	05030013	
Modify the CODEID of the finite PDF417	05030014	
Disable Tail	05040000	
Add CR tail	05040001	
Add TAB tail	05040002	

Add CRLF tail	05040003	
Transmit the entire Data	05050000	
Only transmit the Start segment.	05050001	
Only transmit End segments.	05050002	
Transmit only Center	05050003	
Modify the Start segment length	05050004	
Modify the End segment length	05050005	
Allow RF information to be sent	05060000	
Sending RF information disabled	05060001	
Modify RF information	05060002	
Only data output	05070000	
Output with protocol	05070001	
GS replacement on	050A0000	
GS replacement shutdown	050A0001	
GS replacement information modification	050A0002	
Allow reading all types	07000000	
Read all types disabled	07000001	
Allow reading ability to strengthen	07000007	
Strengthening reading disabled	07000008	

Enabled default reading mode	07000002	
Allow reading EAN13	07010000	
Read EAN13 disabled	07010100	
EAN13 forces the output of additional codes	07011000	
EAN13 does not require the output of additional codes	07011100	
EAN13-2 bit additional code enabled	07012000	
EAN13-2 bit additional code disabled	07012100	
EAN13-5 additional code enabled	07013000	
EAN13-5 bit additional code disabled	07013100	
Allow reading EAN8	07020000	
Reading EAN8 disabled	07020100	
EAN8 forced output additional code	07021000	
EAN8 output additional codes not required	07021100	
EAN8-2 bit additional code enabled	07022000	
EAN8-2 bit additional code disabled	07022100	
EAN8-5 bit additional code enabled	07023000	
EAN8-5 bit additional code disabled	07023100	
Allow reading UPCA	07030000	

No reading UPCA	07030100	
UPCA forces output of additional codes	07031000	
UPCA output additional codes not required	07031100	
UPCA-2-bit additional code enabled	07032000	
UPCA-2-bit additional code disabled	07032100	
UPCA-5-bit additional code enabled	07033000	
UPCA-5-bit additional code disabled	07033100	
Allow UPCA to EAN13	05080000	
UPCA to EAN13 disabled	05080001	
Allow reading UPC-E0	07040000	
Reading UPC-E0 disabled	07040100	
UPC-E0 forces output of additional codes	07041000	
UPC-E output additional codes not required	07041100	
UPC-E0-2-bit additional code enabled	07042000	
UPC-E0-2-bit additional code disabled	07042100	
UPC-E0-5-bit additional code enabled	07043000	
UPC-E0-5-bit additional code disabled	07043100	

Allow reading UPC-E1	07050000	
Reading UPC-E1 disabled	07050100	
UPC-E1 forces the output of additional codes	07051000	
UPC-E1 output additional codes not required	07051100	
UPC-E1-2-bit additional code enabled	07052000	
UPC-E1-2-bit additional code disabled	07052100	
UPC-E1-5-bit additional code enabled	07053000	
UPC-E1-5-bit additional code disabled	07053100	
Allow reading Code128	07060000	
Reading Code128 disabled	07060100	
The minimum length of Code128 information is 0.	07061000	Other lengths can modify the last two digits of the parameter.
The minimum length of Code128 information is 4.	07061004	
The maximum length of Code128 information is 32.	07061120	
The maximum length of Code128 information is 255.	070611FF	
Allow reading Code39	07070000	
Reading Code39 disabled	07070100	
The minimum length of Code39 information is 0.	07071000	Other lengths can modify the last two digits of the parameter.



The minimum length of Code39 information is 4.	07071004	
The maximum length of Code39 information is 32.	07071120	
The maximum length of Code39 information is 255.	070711FF	
Code39 initiator output	07072000	
Code39 start character not output	07072100	
Code39 terminator output	07073000	
Code39 terminator is not output.	07073100	
Allow reading Code32	07074000	
Read Code32 disabled	07074100	
Code32 prefix A output	07076000	
Code32 prefix A is not output.	07076100	
Allow reading Code93	07080000	
No reading Code93	07080100	
The minimum length of Code93 information is 0.	07081000	Other lengths can modify the last two digits of the parameter.
The minimum length of Code93 information is 4.	07081004	
The maximum length of Code93 information is 32.	07081120	
The maximum length of Code93 information is 255.	070811FF	
Allow reading CodaBar	07090000	

Read CodaBar disabled	07090100	
The minimum length of CodaBar information is 0.	07091000	Other lengths can modify the last two digits of the parameter.
The minimum length of CodaBar information is 4.	07091004	
The maximum length of CodaBar information is 32.	07091120	
The maximum length of CodaBar information is 255.	070911FF	
CodaBar start-stop symbol sending permission	07092000	
CodaBar start-stop symbol transmission prohibition	07092100	
Allow reading Interleaved 2 of 5	070A0000	
Reading Interleaved 2 of 5 disabled	070A0100	
The minimum length of Interleaved 2 of 5 information is 0.	070A1000	Other lengths can modify the last two digits of the parameter.
The minimum length of Interleaved 2 of 5 information is 4.	070A1004	
The maximum length of Interleaved 2 of 5 information is 32.	070A1120	
The maximum length of Interleaved 2 of 5 information is 255.	070A11FF	
Allow reading Industrial 25	070B0000	
Reading Industrial 25 disabled	070B0100	
The minimum length of Industrial 25 information is 0.	070B1000	Other lengths can modify the last two digits of the parameter.
The minimum length of Industrial 25 information is 4.	070B1004	

The maximum length of Industrial 25 information is 32.	070B1120	
The maximum length of Industrial 25 information is 255.	070B11FF	
Allow reading Matrix 2 of 5	070C0000	
Reading Matrix 2 of 5 disabled	070C0100	
The minimum length of Matrix 2 of 5 information is 0.	070C1000	Other lengths can modify the last two digits of the parameter.
The minimum length of Matrix 2 of 5 information is 4.	070C1004	
The maximum length of Matrix 2 of 5 information is 32.	070C1120	
The maximum length of Matrix 2 of 5 information is 255.	070C11FF	
Matrix 2 of 5 verification format is Mod10.	070C2000	
Matrix 2 of 5 check format is None.	070C2100	
Allow reading Code11	070D0000	
Reading Code11 disabled	070D0100	
The minimum length of Code11 information is 0.	070D1000	Other lengths can modify the last two digits of the parameter.
The maximum length of Code11 information is 4.	070D1004	
The maximum length of Code11 information is 32.	070D1120	
The maximum length of Code11 information is 255.	070D11FF	
Code11- 1bit check	070D2000	

Code11-2bit check	070D2100	
Allow reading MSI	070E0000	
No reading MSI	070E0100	
The minimum length of MSI information is 0.	070E1000	Other lengths can modify the last two digits of the parameter.
The minimum length of MSI information is 4.	070E1004	
The maximum length of MSI information is 32.	070E1120	
The maximum length of MSI information is 255.	070E11FF	
Allow reading RSS-14	070F0000	
Reading RSS-14 disabled	070F0100	
Allow reading restricted RSS	070F1000	
Reading restricted RSS disabled	070F1100	
Allow reading extended RSS	070F2000	
Reading extended RSS disabled	070F2100	
The minimum length of RSS information is 0.	070F3000	Other lengths can modify the last two digits of the parameter.
The minimum length of RSS information is 4.	070F3004	
The maximum length of RSS information is 32.	070F3120	
The maximum length of RSS information is 255.	070F31FF	
Allow reading QR	07140000	

No reading QR	07140100	
Allow reading DM	07150000	
Prohibit reading DM	07150100	
Allow simultaneously reading multiple DM	07151000	
Simultaneously Reading multiple DM barcodes disabled	07151100	
Allow reading PDF417	07160000	
No reading PDF417	07160100	
Save	08000000	
Delete the previous one-bit data	08000001	
Delete a string of data read earlier	08000002	
Delete modifying settings	08000003	
0	08010000	
1	08010001	
2	08010002	
3	08010003	
4	08010004	
5	08010005	
6	08010006	
7	08010007	

8	08010008	
9	08010009	
A	0801000A	
B	0801000B	
C	0801000C	
D	0801000D	
E	0801000E	
F	0801000F	

