RTscan

User Guide and Command Manual

Barcode Scanner Module

RT218/RT241

（2024.10）

Contents

Introduction

There are two ways to configure the Scanner: Barcode programming, and command programming.

Barcode Programming

The Scanner can be configured by scanning programming barcodes. **See section 3.**
This programming method is the most straightforward.

Command Programming

The Scanner can also be configured by the serial commands sent from the host device.
Users can design an application program to send those command strings to the engines to perform device configuration.

Please refer to Section 1, 2 for the command format and **Section 5 (Parameter Command) for full commands list.**

1. Command Programming: SSI Commands

Table 1-1 SSI Commands

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

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 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
	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	Checksum of message

		message contents excluding checksum.	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	Opcode	Message Source	Status	Data	Checksum
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

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	1 Byte	Identifies where the message is coming

	0 = Scan engine		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	Barcode Type	Decode Data	Checksum
	0xF3	0x00				

Table 1-10 Field Descriptions

Field Name	Format	Size	Description
Length	Length of message (not including checksum).	1 Byte	Length Field
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.
Barcode 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 barcode 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
EAN 8 with 2 Supps	0x4A	Code11	0x0C
EAN 8 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 checksum)	1 Byte	Length field
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	1 Byte	Identifies the transmission status. Unused

	Bit 1-7: 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

Table1-14 Packet Format

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

Table 1-15 Field Descriptions

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

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** barcode.

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 barcode.

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

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
#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 barcode.

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

SCAN_DISABLE

Description: Prevent the scan engine from scanning barcodes.

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 barcodes.

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	1 Byte	Length field

	checksum)		
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
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
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 barcode.

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	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

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.

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

Table 2-1 SSI Extended Command

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	Opcode 2	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
	Bit 2	Reserved	Always set to zero
	Bit 3	Change Type (applies to parameters)	0 = Temporary change 1 = Pe rmanent 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	1 Byte	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.
BarCode 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. Barcode Programming: Parameter Configuration

The Scanner can be configured by scanning programming barcodes. Scan setting bar codes in this section to configure the barcode scanner.

This programming method is most straightforward.

Set Default Parameter

To restore Factory Default Configuration, scan the appropriate barcode below.

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

Factory Default Configuration

(0x00)

You may need to reset all parameters to the factory defaults when:

- ✧ The engine is not properly configured, resulting in a failure to decode barcodes.
- ✧ You have forgotten previous configuration and wish to avoid its impact.

Scan Mode

Parameter # 0x8A

Continuous Mode

The reading engine continuously operates and ends the reading if there is a successful reading or if the reading time exceeds a certain limit. If the specified time is surpassed, the next reading is automatically triggered.

Sense Mode

In sense mode, the scan engine detects the brightness of the surroundings and triggers a reading when there is a change in brightness. The reading ends if there is a successful read or if the reading time exceeds a certain limit. Regardless of the previous read result, the scan engine will re-evaluate the brightness of the surrounding environment.

Level Mode / Command trigger mode

In this mode, the scan engine is triggered to read through a command, and the reading can also be terminated by a command. The reading ends if there is a successful read or if the reading time exceeds a certain limit.

Continuous
(0X04)

 # Sense Mode
(0x09)

Level Mode / Command trigger mode
(0X08)

Duration in Scanning

Parameter # 0x88

This parameter determines the maximum duration for decode processing during a scan attempt. It can be programmed in 0.1-second increments, ranging from 0.50 to 25.5 seconds.

To set a scanning duration, first, scan the barcode provided below. Next, scan three *Numeric Barcodes* from the appendix that correspond to the desired on-time. For single-digit numbers, ensure there is a leading zero. For example, to set a duration time of 0.5 seconds, scan the barcode below and then scan the "0", "0", and "5" barcodes. To set a duration time of 10.5 seconds, scan the barcode below and then scan the "1", "0", and "5" barcodes. To change your selection or cancel an incorrect entry, scan the *Cancel* in the appendix.

Duration in Scanning(Default: 3.0 sec.)

Quick Setting

Parameter # 0xF2 0xCF

Support 3S、5S、10S、15S、20S、30S、60S and infinite time.

infinite time
(0x00)

3s
(0x03)

5s
(0x05)

10s
(0x0A)

15s
(0x0B)

20s
(0x0C)

30s
(0x0D)

60s
(0x0E)

Continuous Reading Interval

Parameter # 0x89

This parameter determines the interval time between two readings in continuous mode. Regardless of the last success or failure to read, if the specified time is surpassed, the next reading will be automatically triggered.

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

To set a Continuous Reading Interval, first, scan the barcode provided below. Next, scan two *Numeric Barcodes* from the appendix that corresponds to the desired timeout. For single-digit values, ensure there is a leading zero. For example, to set a timeout of 0.5 seconds, scan the barcode below and then scan the "0" and "5" barcodes. To change your selection or cancel an incorrect entry, scan the *Cancel* in the appendix.

Continuous Reading Interval
(Default: 500ms.)

Same Code Reading Delay

Parameter #0xF3 0x03

To prevent multiple readings of the same barcode in continuous mode and sense mode, you can set the scan engine to allow reading the same barcode after a specified delay. The same code reading delay ensures that the same barcode is not read within the set length of time.

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

To set the same code reading delay, scan the barcode provided below. Next, scan two *Numeric Barcodes* from the appendix that corresponds to the desired timeout. For single-digit values, make sure to include a leading zero. For example, to set a timeout of 0.5 seconds, scan the barcode below and then scan the "0" and "5" barcodes. To change your selection or cancel an incorrect entry, scan the *Cancel* in the appendix.

Example:

To set the same code reading delay to 200ms, first, scan the same code reading delay setting code, and then scan the *Numeric Barcodes* "0" and "2".

To set the same code reading delay to 1500ms, first, scan the same code reading delay setting code, and then scan the *Numeric Barcodes* "1" and "5".

3F30000003

Same Code Reading Delay

Fast Setting

Parameter # 0xF2 0xC9

Fast setting, Including 0s、1s、3s、5s、7s and infinite delay.

3030C90

No Delay
(0x00)

3030C91

Delay 1s
(0x01)

3030C93

Delay 3s
(0x03)

3030C95

Delay 5s
(0x05)

Delay 7s
(0x07)

Infinite Delay(Disable Same code reading delay)
(0x09)

Continue Scanning

Parameter # 0xF6 0x39
Applicable trigger method: Level Mode / Command trigger mode.
In the continuous scanning mode, the continuous reading interval and the same code delay are effective.

***Disable**
(0x00)

Enable
(0x01)

The Same Code Is Not Output In a Single Round Of Decoding

Parameter # 0xF6 0x6B
In a decoding round, the decoded data of the same barcode as the previous scan will not be output. The system can cache up to 20 different historical records of decoding results. This function is particularly useful in modes such as "key continuous" and "continue to scan code".

Example:
In "Continue to scan code" and "Level Mode / Command trigger mode", the end of a scan code due to timeout will not be considered the end of the decoding round.

***Disable**
(0x00)

Enable
(0x01)

Disable passive trigger scanning

Scan below enable barcode, command triggers will be disabled.
Parameter # 0xF2 0xA8

*** Disable**
(0x00)

Enable
(0x01)

Sensitivity Level

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

Special
(0x00)

*** High**
(0x01)

3030042

Middle
(0x02)

3030043

Low
(0x03)

Custom Sensitivity

Parameter #0xF3 0x01
Set Sense Mode sensitivity, The smaller ,the more sensitive, Values range 00-15
Default: 01
For example：

Set sensitivity is 2

Scan the custom sensitivity setting code,then scan *Numeric Barcodes* 0 and 2

3F30000001

Custom Sensitivity

Stability of Induction Time

Parameter #0xF3 0x02
To set the stable time before the sense mode enters the detection environment, follow these steps:

Scan the barcode provided below.
Scan the two Numeric Barcodes from the appendix to set the desired required time. If the value is less than 2 digits, include leading zeros.

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

Example:

To set the stability of induction time to 200ms, perform the following:

Scan the stability of the induction time setting code.
Scan the *Numeric Barcodes* "0" and "2".
To set the stability of induction time to 1500ms, perform the following:

Scan the stability of the induction time setting code.
Scan the *Numeric Barcodes* "1" and "5".

Stability of Induction Time

Communication Mode

Parameter # 0xF2 0x01

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

 # % USB KBW
(0x01)

USB Serial Port
(0x02)

AUTO UK
(0x03)

AUTO UV
(0x04)

PS2
(0x09)

TTDATA
(0x0A)

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)

Parameter # 0xF6 0x37

[AUTO UK] USB and serial port output at the same time (USB uses KBW)
[AUTO UV] USB and serial port output at the same time (USB uses USB serial port)
[AUTO UT] USB and serial port output at the same time (USB uses TTDATA)

Serial Parameters

Baud Rate

Parameter # 0x9C

The baud rate refers to the number of bits of data transmitted per second. It is crucial to ensure that the scan engine's baud rate setting matches the data rate setting of the host device. If the settings do not match, data may fail to reach the host device or may be received in a distorted form.

Baud Rate 1200
(0x03)

Baud Rate 2400
(0x04)

Baud Rate 4800
(0x05)

*** Baud Rate 9600**
(0x06)

Baud Rate 19,200
(0x07)

Baud Rate 38,400
(0x08)

Baud Rate 57600
(0x09)

Baud Rate 115200
(0x0A)

Data Bit

Parameter # 0xA0

Data bit: This is a parameter to measure the actual data bit in communication.

7 Data Bits
(0x02)

***8 Data Bits**
（0x03）

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.

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.

Even
(0x01)

Select **MARK** parity and the parity bit is always 1.

Mark
(0x02)

Select **SPACE** parity and the parity bit is always 0.

Space
(0x03)

If no parity is required, select **NONE**.

*** None**
(0x04)

Stop Bit Select

Parameter # 0x9D

The stop bit(s) are used at the end of each transmitted character to indicate the end of transmission for that character and prepare the receiving device for the next character in the serial data stream. It is important to set the number of stop bits (either one or two) to match the requirements of the host device.

*** 1 Stop Bit**
(0x01)

2 Stop Bits
(0x02)

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.

Disable ACK/NAK Handshaking

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

Disable ACK/NAK
(0x00)

Enable ACK/NAK Handshaking

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

The scan engine waits for a response within the programmable Host Serial Response Time-out. If no response is received within this time, the scan engine will resend its data up to two times before discarding the data and reporting a transmit error.

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

Host Serial Response Time-out

Parameter # 0x9B

This parameter determines the waiting time for an ACK or NAK response from the host before the scan engine resends its data. Additionally, if the scan engine intends to send data and the host has already been granted permission to send, the scan engine waits for the specified time-out period before declaring an error.

Default: 2000ms
Unit: 100ms
Range: 100-9900ms

For example:
To set the host serial response timeout to 3000ms, follow these steps:

Scan the host serial response timeout setting code.
Scan the Numeric Barcodes "0" and "3".
To set the host serial response timeout to 9900ms, follow these steps:

Scan the host serial response timeout setting code.
Scan the Numeric Barcodes "9" and "9".

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

Keyboard

Country/Language Keyboard

Parameter #0xF6 0x01

*** American Keyboard**
(0x01)

Belgium
(0x02)

Brazil（ABNT2）
(0x03)

Denmark
(0x06)

Finland
(0x07)

France
(0x08)

Austria、Germany
(0x09)

Greece
(0x0A)

Hungary
(0x0B)

Italy
(0x0D)

Netherlands
(0x0F)

Norway
(0x10)

Poland（214）
(0x11)

Portugal
0x12

Romania (standard)
(0x13)

Russia
(0x14)

Slovakia
(0x15)

Spain
(0x16)

Sweden
(0x17)

Turkey_F
(0x19)

Turkey_Q
(0x1A)

England
(0x1B)

Japan
(0x1C)

Chech
(0x1D)

Thailand Kedmanee
(0x1E)

Ukraine
(0x1F)

Supporting countries of Arabic_101: Saudi Arabia, United Arab Emirates, Oman, Egypt, Bahrain, Qatar, Kuwait, Lebanon, Libya, Syria, Yemen, Iraq, Jordan.

Arabic_101
(0x20)

Croatia
(0x21)

Korea
(0x22)

Bulgaria
(0x23)

Multi-country Common
(0x24)

[Note 1]: Need to install WIN plug-in
[Note 2]: Multi-country common: In principle, the output character set should be set to UTF8
[Note 3]: Multi-country common: Microsoft Word (Office Word) cannot use this method. You can use the virtual keyboard method, the output character set should be set to UTF8, and the keyboard should be set to an American keyboard.

Vietnam
(0x25)

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

0ms
(0x00)

5ms
(0x03)

10ms
(0x01)

50ms
(0x02)

Letter case conversion

If set to "Case Inversion", the output data will have its uppercase letters converted to lowercase, and lowercase letters converted to uppercase.

If set to "All Uppercase", regardless of the original letter case in the output data, all letters will be converted to uppercase.

If set to "All Lowercase", regardless of the original letter case in the output data, all letters will be converted to lowercase.

Parameter #0xF2 0xA1

*** Normal Letter Case**
(0x00)

All Uppercase
(0x01)

All Lowercase
(0x02)

Case Inversion
(0x03)

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

*** Standard Keyboard**
(0x00)

Virtual Keyboard
(0x01)

Keyboard State Control

Scanner control the state of the keyboard.

Parameter # 0xF2 0XB9

Disable
(0x00)

*** Enable**
(0x01)

ASCII Control Character Output Mode Selection

Parameter # 0xF2 0xAD

(0) Output Function Key: The control character is used as a custom function key. For more information, refer to Appendix Table 4-3.

(1) Output Ctrl Combination Key: Output control characters using Ctrl combination keys. For more information, refer to Appendix Table 4-3.

(2) ALT Mode Output Control Character: Support full control character output in the Chinese environment. Refer to the standard ASCII table for specific details.

(3) Output Enter, DownArrow: Mask other control characters and only output specific ones. Output 0x07 for Enter, 0x0A for DownArrow, and 0x0D for Enter.

(4) Output Ctrl key combinations that are not present on the keyboard: Enter.

Output Function Key
(0x00)

Output Ctrl Combination Key
(0x01)

ALT Mode Output Control Character
(0x02)

Output Enter、DownArrow
(0x03)

Output CTRL+key combination, but not including the keys on the keyboard
(0x04)

Modbus Rtu Networking Function

Disable/Enable Modbus Rtu Function

Parameter # 0xF6 0x43

***Disable**
(0x00)

Enable
(0x01)

Barcode Cache

Parameter # 0xF6 0x44

***Direct Output (Modebus Rtu Format)**
(0x00)

6064401

Cache
(0x01)

Slave Address Setting

Parameter # 0xF3 0x33

Note: The factory default slave address is 0x00, and the customer needs to configure it to another address (1-255) before it can be used.

Scan setting code to set the slave address , and then scan three number setting codes, the decimal slave address (1-255).

For example, to set the slave address to 0x0A (10), you need to scan the number setting code of 0, 1, 0 in order to set the address to 10 (0x0A).

3F30000033

Set The Slave Address

Quickly Set The Slave Address

Parameter # 0xF6 0x43

Note: The factory default slave address is 0x00, and the customer needs to configure it to another address (1-255) before it can be used.

6064500

***Address 0x00**
(0x00)

6064501

Address 0x01
(0x01)

Address 0x02
(0x02)

Address 0x03
(0x03)

Address 0xAA
(0xAA)

Address 0xBB
(0xBB)

Power Mode

Parameter # 0x80

In Low-Power Mode, the scanning engine automatically enters a sleep state after 800ms of idle time. It can be awakened by sending a wake-up command.

In Continuous Power Mode, the scanning engine remains awake after each decoding attempt.

Regardless of the power mode (Low-Power or Continuous), you can use sleep and wake-up commands to change the power state. The sleep command (SLEEP) is used to immediately put the scanning engine to sleep: 04 EB 04 00 FF 0D. The wake-up method involves sending 0x00 to introduce a delay of 50ms, followed by sending a valid command to wake up the scanning engine.

Continuous Power

(0x00)

Low power consumption(Low Power)
(0x01)

Beeper

Beeper Volume

Parameter # 0x8C

To select a decode beep volume, scan the appropriate barcode.

Low
(0x02)

Medium
(0x01)

*** High**
(0x00)

Mute
(0x03)

Beeper Type

Parameter # 0xF2 0xD8

*** Passive Beeper**
(0x00)

Active Beeper
(0x01)

Beep After Good Decode

Parameter # 0x38

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

*** Beep After Good Decode**
(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.

Do Not Beep After Good Decode
(0x00)

Indicator Light Function

Parameter # 0xF2 0x0A

Scan the appropriate barcode below to set indicator light function.

*** Good Decode**
(0x00)

Power LED
(0x01)

LED After Good Decode

Parameter # 0xF2 0x0B

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

Disable
(0x00)

*** Enable**
(0x01)

Decode Indicator Control

Parameter # 0xF2 0xCB

Mode 0: The light is off when powered on. It becomes bright when decoding is successful. The light will turn off after the specified time.

Mode 1: The light is on when powered on. It turns off when decoding is successful. The light will turn on after the specified time (the light remains on in Sleep mode).

Mode 2: The light is on when powered on. It turns off when triggering decoding. It becomes bright when decoding is successful. The light will turn off after the specified time.

Mode 3: The decoding indicator light is used as the illumination light. It turns on during decoding and turns off when decoding ends.

*** Mode 0**
(0x00)

Mode 1
(0x01)

Mode 2
(0x02)

Mode 3
(0x03)

Mute

Parameter # 0xF2 0x0C

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

*** Disable**
(0x00)

Enable
(0x01)

Boot prompt

Parameter # 0xF2 0x0D

Disable

(0x00)

*** Enable**
(0x01)

Setup Code Prompt

Parameter # 0xF2 0x0E

Disable
(0x00)

*** Enable**
(0x01)

Floodlight Control

Parameter # 0xF2 0x02

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

Always Lighting
(0x01)

Always Close

(0x02)

Positioning light

Positioning light control

Parameter # 0xF2 0x03

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

Always Lighting
(0x01)

Always Close
(0x02)

Positioning light Flicker

Parameter # 0xF2 0xB8

***Flicker**
(0x00)

No Flicker
(0x01)

Decode Data Packet Format

Parameter # 0xEE

This parameter selects whether decoded data is transmitted in raw format (unpacketed), 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)

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.

1020101

Enable No Read
(0x01)

When disabled, it cannot send any messages to the host even if the barcode cannot be decoded.

1020100

*** Disable No Read**
(0x00)

Transmit Code ID Character

Parameter # 0x2D

A code ID character is used to identify the code type of a scanned barcode. This can be helpful when decoding multiple code types. The code ID character is inserted between the prefix character (if selected) and the decoded symbol.

You have three options for the code ID character: no code ID character, Symbol Code ID character, or AIM Code ID character. The Symbol Code ID characters are listed below. For AIM Code Identifiers, please refer to the relevant documentation. *AIM Code Identifiers*.

Code ID
(0x02)

AIM ID
(0x01)

*** None**
(0x00)

Terminator

Parameter # 0xF2 0x05

Add character format: Decode Data+Terminator.

*** Disable**
(0x00)

 # & CR LF
(0x01)

% CR
(0x02)

TAB
(0x03)

CR CR
(0x04)

CR LF CR LF
(0x05)

Prefix/Suffix

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 barcodes) that corresponds to ASCII values. See the *Table 4-3* and *Numeric Barcodes* 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 *Character Comparison Table.*

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

Scan Prefix

Scan Suffix 1

Scan Suffix 2

Data Format Cancel

Continuously Set Multiple Prefix and Suffix Modes

Note: You must set the prefix value or suffix value first, and then set the data transmission format.

Continuously Set Multiple Prefix

Parameter # 0xF3 0x10

The default setting is one prefix, but you can configure up to ten prefixes. Scan the barcode below to enable the continuous setting of multiple prefixes. Scan Numeric Barcodes to set each prefix. Each set of four Numeric Barcodes corresponds to a prefix character as specified in the provided appendix table. The process automatically ends after scanning for ten prefixes. If you require additional prefixes, you can scan "Complete Continuous Setup of Multiple Prefixes/Suffixes" to finalize the prefix settings in advance.

Note: To utilize multiple prefixes, you must configure the data transmission format accordingly. For example, "multiple prefix + data" or "multiple prefix + data + multiple suffixes" corresponds to the functionality of multiple prefixes.

Continuously Set Multiple Prefix (0x00)

Quickly Set Multiple Prefixes

Parameter # 0xF8 0x14

Suppose the prefix value is set to: AB (ASCII value: 0x41, 0x42)

Setting code

Continuously Set Multiple Suffixes

Parameter # 0xF3 0x11

The default setting is two suffixes, but you can configure up to ten suffixes. Scan the barcode below to enable the continuous setting of multiple suffixes. Scan Numeric Barcodes to set each suffix. Each set of four Numeric Barcodes corresponds to a suffix character as specified in the provided appendix table. The process automatically ends after scanning for ten suffixes. If you require additional suffixes, you can scan "Complete Continuous Setup of Multiple Prefixes/Suffixes" to finalize the suffix settings in advance.

Note: To utilize multiple suffixes, you must configure the data transmission format accordingly. For example, "data + multiple suffixes" or "multiple prefixes + data + multiple suffixes" corresponds to the functionality of multiple suffixes.

Continuously Set Multiple Suffix (0x00)

Quickly Set Multiple Suffixes

Parameter # 0xF8 0x15

Suppose the suffix is set to： AB (ASCII value: 0x41, 0x42)

Setting code

Complete Continuous Setup of Multiple Prefixes / Suffixes

Parameter # 0xFF 0XF6

Scanning the code below will exit the state of the continuous setup of multiple prefixes or suffixes while preserving the current prefix or suffix sets.

Note: If you have set ten prefixes or suffixes continuously, the setting will be automatically terminated. Otherwise, the code below must be scanned each time to exit the state.

Complete Continuous Setup of Multiple Prefixes / Suffixes (0x00)

Exit Set Prefix or Suffix

Parameter # 0xFF 0XF6

Scanning the barcode below will exit continuously set prefix or suffix. And reserve the current setting of prefix or suffix.

Note:If continuously set ten prefixes or suffixes,then automatic end setting. Otherwise, scan the barcode below every time to exit.

Exit Set Prefix or Suffix (0x00)

Scan Data Transmission Format

Parameter # 0xEB

Scan the following corresponding barcodes to set the desired data transmission format.

Note: After setting the prefixes or suffixes, scan the barcode below to configure the corresponding data format. For example, if the data format was "data + suffix 1" before setting the prefixes, you must scan "prefixes + data" or "prefixes + data + suffixes" to enable the prefix function.

*** Original Data**
(0x00)

<DATA><SUFFIX 1>
(0x01)

<DATA><SUFFIX2>
(0x02)

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

<PREFIX> <DATA >
(0x04)

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

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

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

Data + Multiple Suffixes
(0x08)

Multiple Prefixes+Data
(0x09)

Multiple Prefixes+Data+Multiple Suffixes
(0x0A)

STX and ETX Setting

Parameter # 0xF2 0XB7

*** Disable**
(0x00)

STX(prefix)
(0x01)

ETX(suffix 1)
(0x02)

STX(prefix)+ETX(suffix 1)
(0x03)

Suffix Key Combination

It is suitable for the USB KBW communication method. It allows the configuration of single or multiple key combination functions. If you need to include Ctrl and Shift keys in the combination, enable both the suffix Ctrl key combination function and the suffix Shift key combination function simultaneously.

Suffix Alt Key Combination

Parameter # 0xF6 0x2B

***Disable**
(0x00)

Enable
(0x01)

Suffix Ctrl Key Combination

Parameter # 0xF6 0x2C

***Disable**
(0x00)

Enable
(0x01)

Suffix Shift Key Combination

Parameter # 0xF6 0x2D

***Disable**
(0x00)

Enable
(0x01)

Suffix And Terminator Are Not Affected By The Output Mode Of ASCII Control Characters

Parameter # 0xF6 0x49

Suitable for communication method USB KBW.

***Disable**
(0x00)

6064901

Enable
(0x01)

Set Prefix and Suffix according to Barcode Type

Set Prefix according to Barcode Type

Parameter # 0xF3 0x12

Set multiple prefix according to barcode type.First,scan the barcode below.Second,choose barcode type, according to table 1-11 and table 4-3, scan the index of the corresponding hexadecimal value.For example, the QR code type is 0XF1,then scan “1” “2” “4” “1” digital setting code to set the barcode type. Third,scan barcode to set prefix or suffix,for example,set number "1",then scan “1” “0” “4” “9” digital setting code.Last, scan Exit Set Prefix or Suffix barcode.

3F30000012

Set Prefix according to Barcode Type

Set Suffix according to Barcode Type

Parameter # 0xF3 0x13

Refer to “Set Prefix according to Barcode Type”

3F30000013

Set Suffix according to Barcode Type

Clear Prefix according to Barcode Type

Parameter # 0xF3 0x14

Clear multiple prefix according to barcode type.First,scan the barcode below.Second,choose barcode type, according to table 1-11 and table 4-3, scan the index of the corresponding hexadecimal value.For example, the QR code type is 0XF1,then scan “1” “2” “4” “1” digital setting code to clear the prefix of QR.

Note:If you need to clear the prefix of all barcode type,scan “1” “2” “5” “5”(0xFF) digital setting code.

3F30000014

Clear Prefix according to Barcode Type

Clear Suffix according to Barcode Type

Parameter # 0xF3 0x15

Refer to “Clear Prefix according to Barcode Type”.

Clear Suffix according to Barcode Type

Enable/Disable Prefix or Suffix

Parameter # 0xF2,0xD4

Scan the following corresponding barcode to set the desired data transfer format.

Disable Prefix or Suffix (Raw Data)
(0x00)

Enable Prefix(Prefix+ Data)
(0x01)

Enable Suffix(Data+ Suffix)
(0x02)

Enable Prefix and Suffix(Prefix+Data+Suffix)
(0x03)

Hide Custom Barcode Data

Hide Head Data

Parameter # 0xF2 0xC6

You can configure the scanner to hide the head data from the decoded output data. The length of the hidden data can be set to any desired value. If the configured length exceeds the length of the barcode data, the entire content of the current barcode can be hidden.

*** Disable**
(0x00)

Enable
(0x01)

Set the Length of the Hidden Head Data

Parameter # 0xF3 0x0B

Set the length of the hidden head data, range is 1-255. Scan the barcode below and then scan the Numeric Barcodes, such as the need to hide 16 characters, then scan Numeric Barcodes 0,1,6 in sequence.

Hide Intermediate Data

Parameter # 0xF2 0xC7

Hide intermediate data to decoded output data. You can configure any starting position and length. If the starting position of the configuration exceeds the barcode data length, the current barcode is not hidden. If the configuration length exceeds the remaining barcode data length, all barcode data after the starting position is hidden.

*** Disable**
(0x00)

3030C71

Enable
(0x01)

Set the Starting Position of Hiding the Intermediate Data

Parameter # 0xF3 0x0C

Set the starting position of hiding the intermediate data, range is 1-255. Scan the barcode below and then scan the Numeric Barcodes. For example, to hide data after the third character (the fourth begins to hide), scan Numeric Barcodes 0, 0,3 in sequence.

3F3000000C

Set the Length of the Hidden Intermediate Data

Parameter # 0xF3 0x0D

Set the length of the hidden intermediate data, range is 1-255. Scan the barcode below and then scan the Numeric Barcodes. such as the need to hide 16 characters, then scan Numeric Barcodes 0,1,6 in sequence.

3F3000000D

Hide Tail Data

Parameter # 0xF2 0xC8

Hide tail data to decoded output data. It can be configured to hide any length. If the configuration length exceeds the barcode data length, then the whole content of the current barcode can be hidden.

3030C80

*** Disable**
(0x00)

3030C81

Enable
(0x01)

Set the Length of the Hidden Tail Data

Parameter # 0xF3 0x0E

Set the length of the hidden tail data, range is 1-255. Scan the barcode below and then scan the *Numeric Barcodes*. such as the need to hide 16 characters, then scan *Numeric Barcodes* 0,1,6 in sequence.

3F3000000E

Custom Barcode Data Reservation

Reserve Header Data

Parameter # 0xF6 0x62

You can configure the scanner to intercept the header data from the decoded output data. The length of the intercepted data can be set from 1 to 65535 bytes. If the configured length exceeds the length of the barcode data, the entire content of the current barcode will be reserved.

For example, if the barcode data is "12345ABC" and you configure to reserve 5 bytes of data in the header, the output will be "12345". However, if you configure to reserve more than 8 bytes of data in the header, the output will be the full data "12345ABC".

6066200

***Disable**
(0x00)

6066201

Enable
(0x01)

Set The Length Of The Reserved Header Data

Parameter # 0xF3 0x35

Configure the length of the reserved header data, the range is 1-9999. After scanning the current barcode, scan four number setting codes (decimal value). For example,15 bytes of characters need to be reserved, scan the number setting code in order: 0 0 1 5.

3F30000035

Quickly Set The Length Of The Reserved Header Data

Parameter # 0xF8 0x28

Configure the length of the reserved header data, the range is 1-65535 (0xFFFF). Need to cooperate with the barcode generator to generate a custom length setting code, the format is 80828XXXX (XXXX is an uppercase hexadecimal value), for example, 15 bytes of characters need to be reserved, then the setting code value is 80828000F.

808280001

Reserve 1 Byte Of Header Data
(0x0001)

80828270F

Reserve 9999 Bytes Of Header Data
(0x270F)

80828FFFF

Reserve 65535 Bytes Of Header Data
(0xffff)

Reserve Middle Data

Parameter # 0xF6 0x63

The decoded output data can be intercepted in the middle by configuring the starting position and length. The starting position can range from 1 to the length of the barcode data, and the length can range from 1 to 65535 bytes.

If the configured starting position exceeds the length of the barcode data, no data will be retained or output. If the configured length exceeds the remaining length of the barcode data after the start position, all barcode data after the start position will be retained.

For example, if the barcode data is "12345ABC" and the starting position is set to 5 with a length of 2, the output will be "AB". If the starting position is set to 5 with a length of 5, the output will be "ABC". However, if the starting position exceeds the length of the barcode, no data will be retained or output.

6066300

***Disable**
(0x00)

Enable
(0x01)

Set The Starting Position To Reserve Middle Data

Parameter # 0xF3 0x36

Configure the starting position of the reserved middle data, the range is 1-9999. After scanning the current barcode, scan four number setting codes (decimal value). For example, to reserve the data after the 15th byte character (reserved starting from the 16th) , scan the number setting code in order: 0 0 1 5.

Quickly Set The Starting Position To Reserve Middle Data

Parameter # 0xF8 0x29

Configure the starting position of the reserved middle data, the range is 1-65535 (0xFFFF). Need to cooperate with the barcode generator to generate a custom length setting code, the format is 80829XXXX (XXXX is an uppercase hexadecimal value).For example, if you need to reserve the data after the 15th byte character, then the setting code value is 80829000F.

Reserve The Data After The First Byte
(0x0001)

Reserve The Data After The 9999th Byte
(0x270F)

Reserve The Data After The 65535th Byte
(0xFFFF)

Set The Length Of The Reserved Middle Data

Parameter # 0xF3 0x37

Configure the length of the reserved middle data， the range is 1-9999.After scanning the current barcode, scan four number setting codes (decimal value).For example, to reserve data of 15 bytes after the start position， then scan the number setting code in order: 0 0 1 5.

3F30000037

Quickly Set The Length Of The Reserved Middle Data

Parameter # 0xF8 0x2A

Configure the length of the reserved middle data，the range is 1-65535 (0xFFFF). Need to cooperate with the barcode generator to generate a custom length setting code, the format is 80829XXXX (XXXX is an uppercase hexadecimal value).For example, to reserve data of 15 bytes after the start position，then the setting code value is 8082A000F.

8082A0001

1 Byte Of Data After The Start Position Is Reserved (0x0001)

8082A270F

9999 Bytes Of Data After The Start Position Are Reserved (0x270F)

8082AFFFF

65535 Bytes Of Data After The Start Position Are Reserved (0xFFFF)

Reserve Tail Data

Parameter # 0xF6 0x64

Tail data interception of decoded output data，and the length of 1-65535 bytes can be configured. If the configured length exceeds the length of the barcode data, the entire content of the current barcode will be reserved.

For example, barcode data: 12345ABC, if the last 3 bytes of data are reserved, then output: ABC.If the last 5 bytes of data are reserved, then output: 45ABC.

6066400

***Disable (0x00)**

6066401

Enable
(0x01)

Set The Length Of The Reserved Tail Data

Parameter # 0xF3 0x38

Configure the length of the reserved tail data， the range is 1-9999.After scanning the current barcode, scan four number setting codes (decimal value).For example, if 16-byte characters need to be reserved, scan the number setting code in order: 0 0 1 6.

3F30000038

Quickly Set The Length Of The Reserved Tail Data

Parameter # 0xF8 0x2B

Configure the length of the reserved tail data， the range is 1-65535 (0xFFFF). Need to cooperate with the barcode generator to generate a custom length setting code, the format is 8082BXXXX (XXXX is an uppercase hexadecimal value).For example, 15 bytes of characters need to be reserved, the setting code value is: 8082B000F.

8082B0001

Reserve 1 Byte Of Tail Data
(0x0001)

8082B270F

Reserve 9999 Bytes Of Tail Data
(0x270F)

8082BFFFF

Reserve 65535 Bytes Of Tail Data
(0xFFFF)

Hide The Customized Data String In The Barcode

Enable/Disable

Parameter # 0xF6 0x68

Supports setting 1-32 bytes of custom hidden data, all data strings appearing in the barcode will be hidden and output.

For example, barco-0de data: 123AB456AB789, set hidden data: AB, and finally output: 123456789

Disable*
(0x00)

Enable
(0x01)

Set The Hidden Data String

Parameter # 0xF3 0x2A

After scanning the code, set the hidden value with a set of four number setting codes. For the number setting codes, please refer to: Appendix-Character Comparison Table.

For example, if you want to set the carriage return 0x0D in the shielded barcode, look up the table and you can see that the scan value is 1013. Set carriage return and line feed 0x0D, 0x0A, look up the table to see that the scan value is 1013, 1010.

Regardless of success or failure, every time you finish scanning the code, you must scan the "Complete Setting" setting code to exit the state of continuous setting data.

设置隐藏的数据

Complete The Setup

After configuring the hidden data in the decoded output, scan the provided code to complete the setting. The hidden data can support a maximum of 32 bytes. Once you reach the 32-byte limit, the setting will be automatically saved and the configuration process will be exited. However, if the hidden data is less than 32 bytes, you still need to scan the provided code to complete the setting process.

Complete The Setup

Read Back And Clear

Parameter # 0xF6 0x69

Missettings may occur during the configuration process. With the read-back function, you can query and confirm the currently set data. It also allows reading back the settings without interrupting the ongoing configuration process in the current round. After reading back, you can continue setting the next character based on the previous character's configuration.

To clear the set content, you must first complete the entire configuration process. Once the configuration is completed, you can scan a specific code to clear the previously set settings. This clears the configuration and restores it to the default values.

Read Back The Set Content
(0x00)

Clear The Set Content
(0x01)

Insert Custom Data

Enable/Disable Insert Custom Data

Parameter # 0xF2 0xDE

Support for inserting custom data anywhere in the barcode, up to 10 bytes.

***Disable**
(0x00)

Enable
(0x01)

Set Position of the Inserted Data

Parameter # 0xF3 0x17

According to the position to be inserted, scan the corresponding value (4 digit setting code). Fill 0 in front of the number of insufficient digits. For example, set after the 3rd character, you need to scan 4 digit setting code "0" "0" "0" "3".

If the position is 0, then insert the header of the decoded data. If the position is larger than the decoded data length, the tail of the decoded data is inserted by default. Supported settings for the insertion position range is 0-5000.

Set Position of the Inserted Data

（Next, scan the corresponding Numeric Barcodes.）

Set Inserted Data

Parameter # 0xF3 0x1A

Set to insert custom data, and scan the custom data that needs to be set. For example, if you need to set the character 'QR' (0x51, 0x52), then continuously scan two sets of digital setting code '1''0''8''1' (1000+0x51) and '1''0''8''2' (1000+0x52) .Support up to 10 custom data, can be set continuously. When 10 data is reached, the setting is automatically exited.Complete in advance: Scan the "Exit Set Custom Data" setting code, then exit the setting and save the currently set data.

Set Inserted Data

（Next, scan the corresponding Numeric Barcodes.）

Exit Setting Custom Data

Parameter # 0xFF 0XF6

Exit the setting and save the data that is currently set.

Exit Setting Custom Data

Output Character Set Type

Parameter # 0xF2 0x06

0: Primitive Type
1:GBK(GB2312)
2: UTF8
Default: 0(**Primitive Type**)

Output character set type: Expect the scanning engine to output decoded data according to the specified character set type.

*** Primitive Type**

(0x00)

GBK(GB2312)
(0x01)

UTF8
(0x02)

EUC-KR Korean（for special version）
(0x03)

USB KBW American keyboard， Use ALT+keyboard for numerical output greater than 0x80.

DEC MCS
(0x04)

BIG5
(0x05)

Input Character Set Type

Parameter # 0xF2 0xAB

Input character set type: inform the scanning engine of the character set type used by the sample code generation.

***AUTO**
(0x00)

GBK(GB2312)
(0x01)

UTF8
(0x02)

ASCII
(0x03)

Japanese
(0x04)

Korean（for special version）
(0x05)

DEC Multinational Character Set (MCS)
(0x06)

ISO8859-1 Character Set
(0x07)

Japanese Single Byte (valid for special version)
(0x08)

Cyrillic Character Set（Windows 1251）
(0x09)

Koi8-R Character Set
(0x0A)

BIG5 Character Set
(0x0B)

ISO8859-2 Character Set
(0x0C)

USB Type

USB type,0: USB1.1(Full Speed), 1:USB2.0(High Speed),Default USB1.1
Parameter # 0xF2 0x0F

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

USB2.0(High Speed)
(0x01)

Event Report

Send Event Report Command refers to EVENT in SSI Commands.

Boot Event

Parameter # 0xF2 0xA2
Boot event command: 05 F6 00 00 01 FF 04

***Disable**
(0x00)

Enable
(0x01)

Trigger Event

When the scan engine triggers a reading, it can be prompted either by a command or a GPIO pin. If the GPIO pin is used for prompting, it remains in a low state until the end of the reading process.

Parameter # 0xF2 0xA3

Trigger reading event command: 05 F6 00 00 02 FF 03

*** Disable**
(0x00)

Enable Event
(0x01)

Eable GPIO Pin Event
(0x02)

Enable Event&GPIO Pin Event
(0x03)

Heartbeat Control

Parameter # 0xF2 0xCD

00: Disable heartbeat function

01: Send a heartbeat every 9 seconds(04 50 00 00 FF AC)

02: Send a heartbeat every 9 seconds(04 51 00 00 FF AB), If the ACK is not received in 3 seconds, the device restarts

*** Disable**
(0x00)

Heartbeat doesn't need ACK
(0x01)

Heartbeat needs ACK
(0x02)

URL Blocking

Block URLs starting with "http://" and "https://"
Parameter # 0xF2 0xEa

***Disable**
(0x00)

Enable
(0x01)

Invoice Function

To enable the invoice function, the CODE128 code can be automatically disabled. This means that the scan engine will not decode CODE128 codes unless specifically instructed to do so. If there is a need to read CODE128 codes, you can manually enable the CODE128 decoding functionality.

Automatic Filling of Value-added Tax Invoice

Parameter # 0xF2 0x08

3030080

*** Disable**
(0x00)

3030081

Enable
(0x01)

Invoice Type

Parameter # 0xF2 0xAA

3030AA0

*** Special Invoice**
(0x00)

3030AA1

Plain Invoice
(0x01)

Parameter Scanning

Parameter # 0xEC

To disable the decoding of parameter barcodes, please scan the barcode provided below. However, please note that the "**Set Defaults**" parameter barcode will still be decoded even after disabling parameter barcode decoding. To enable the decoding of parameter barcodes again, you can scan the "**Enable Parameter Scanning**" barcode, scan the "**Set Factory Defaults**" barcode, or set this specific parameter to the value 0x01 using a serial command.

1040601

*** Enable Parameter Scanning**
(0x01)

1040600

Disable Parameter Scanning
(0x00)

Send Setting Code

Parameter # 0xF1 0x71

Enable Send Setting Code to transmit barcodes 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.

N02711

Enable Send Setting Code
(0x01)

N02710

*** Disable Send Setting Code**
(0x00)

Setting Code Password Mode

This is a feature that locks and protects settings. When in the enable setting code password mode, you need to enter the setting code password and pass the verification (unlock the device) before allowing the scanning and setting of the common setting code. After entering the correct password once, the power-on (unlock) is valid.

[Note]: Password 2 digits (00-99)

Enable Setting Code Password Mode

Parameter # 0xF2 0xA7

When the device enters the enabling setting code password mode from the prohibiting setting code password mode, it is necessary to enter the setting code password to verify and pass the verification before allowing the mode to be changed. Disabling this function also requires verifying the password first.

3030A70

*** Disable**
(0x00)

3030A71

Enable
(0x01)

Input Setting Code Password

2 Password, From 0-9

Parameter # 0xF3 0x05

Enter the setting code password: After entering the correct password in the enable setting code password mode, the device will be unlocked and the device will be allowed to perform general setting code operations. Scan the barcode below, then scan the 2-digit setting code in the appendix corresponding to the desired password. If less than 2 bits are filled with 0.

For example, to enter password 68, scan the barcode below, then scan the numeric setting codes "6" and 8". To change the selection or cancel an incorrect setting, scan the cancel barcode in the appendix.

3F30000005

Modify Setting Code Password

The password can be modified only when the setting code password mode is enabled and the password verification is passed (the device has been unlocked).

Parameter # 0xF3 0x06

Scan below barcode to modify setting code password. Then scan two *Numeric Barcodes* 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.

3F30000006

Logout Password

After entering the correct password in password mode, you can scan the setting code of the logout password. By logging out, re-enter the password.

Parameter # 0xF2 0xA9

3030A90

Logout Password

Linear Code Type Security Level

Parameter # 0x4E

The scan engine offers four levels of decode security for linear code types. Select higher security levels for decreasing levels of barcode quality. As security levels increase, the scan engine's aggressiveness decreases.

Select the security level appropriate for your barcode quality.

Linear Security Level 1

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

*** Linear Security Level 1**
(0x01)

Linear Security Level 2

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

Linear Security Level 2
(0x02)

Linear Security Level 3

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

Linear Security Level 3
(0x03)

Linear Security Level 4

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

Linear Security Level 4
(0x04)

Support GS1 Rules And Use Parentheses To Include AI Fields

Currently supports GS1 rules and supports AI fields: (00) transport container serial number, (01) commodity transaction item, (02) commodity transaction item, (10) batch number, (11) production date, (13) packaging date, (15) Best Date, (17) Expiration Date, (21) Serial Number, (30) Quantity, (240) Internal Code, (712) National Medical Insurance Reimbursement Number-Spanish CN, (8012) Software Version, (90) Consistent information among trading partners.

Parameter # 0xF6 0x3C

6063C00

***Disable**
(0x00)

6063C01

Enable
(0x01)

Convert To Hexadecimal

Convert To Hexadecimal Output

Parameter # 0xF6 0x41

The output data is hexadecimal, and the output hexadecimal is fixed at 2 digits, excluding prefixes and suffixes and terminator.

6064100

***Disable**
(0x00)

6064101

Hexadecimal Uppercase
(0x01)

6064102

Hexadecimal Lowercase
(0x02)

Convert To Hexadecimal Interval Output

Parameter # 0xF6 0x42

Output hexadecimal character interval

***Disable Interval**
(0x00)

Space
(0x01)

1D Inverse Barcode Reading

Parameter # 0xF2 0x91

*** Disable**
(0x00)

Enable
(0x01)

Barcode Global Switch

1D Global Switch

Parameter # 0xF2 0x11

Disable
(0x00)

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)

UPC-A

Enable/Disable UPC-A

Parameter # 0x01

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

1000011

*** Enable UPC-A**
(0x01)

1000010

Disable UPC-A
(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),
> 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)

Transmit UPC-A Check Digit

Parameter # 0x28

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

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

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

UPC-A 2-bits Supplementals

Parameter # 0xF2 0x40

Enable
（0x01）

*** Disable**
（0x00）

UPC-A 5-bits Supplementals

Parameter # 0xF2 0x41

Enable
（0x01）

*** Disable**
（0x00）

UPC-A Read Supplementals

Parameter # 0xF2 0x42

Enable
（0x01）

*** Disable**
（0x00）

UPC-E

Enable/Disable UPC-E

Parameter # 0x02

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

*** Enable UPC-E**
(0x01)

Disable UPC-E
(0x00)

UPC-E Preamble

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),
> 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)

Transmit UPC-E Check Digit

Parameter # 0x29

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

1020031

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

1020030

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

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)

UPC-E 2-bits Supplementals

Parameter # 0xF2 0x3D

30303D1

Enable
（0x01）

30303D0

*** Disable**
（0x00）

UPC-E 5-bits Supplementals

Parameter # 0xF2 0x3E

30303E1

Enable
（0x01）

*** Disable**
（0x00）

UPC-E Read Supplementals

Parameter # 0xF2 0x3F

Enable
（0x01）

*** Disable**
（0x00）

UPC-E1

Parameter # 0xF2 0x15

*** Disable**
(0x00)

Enable
(0x01)

EAN-8

Enable/Disable EAN-8

Parameter # 0x04

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

1000041

*** Enable EAN-8**
(0x01)

1000040

Disable EAN-8
(0x00)

EAN-8 Zero Extend

Parameter # 0x27

When enable this setting, the 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)

EAN-8 2-bits Supplementals

Parameter # 0xF2 0x37

3030371

Enable
（0x01）

3030370

*** Disable**

（0x00）

EAN-8 5-bits Supplementals

Parameter # 0xF2 0x38

3030381

Enable
（0x01）

3030380

*** Disable**
（0x00）

EAN-8 Read Supplementals

Parameter # 0xF2 0x39

3030391

Enable
（0x01）

3030390

*** Disable**
（0x00）

EAN-8 Transmit Check Digit

Parameter # 0xF2 0x80

3030800

Disable
(0x00)

***Enable**
(0x01)

EAN-13

Enable/Disable EAN-13

Parameter # 0x03

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

*** Enable EAN-13**
(0x01)

Disable EAN-13
(0x00)

EAN-13 2-bits Supplementals

Parameter # 0xF2 0x3A

Enable
（0x01）

*** Disable**
（0x00）

EAN-13 5-bits Supplementals

Parameter # 0xF2 0x3B

Enable
（0x01）

*** Disable**
（0x00）

EAN-13 Read Supplementals

Parameter # 0xF2 0x3C

Enable
（0x01）

*** Disable**
（0x00）

EAN-13 Transmit Check Digit

Parameter # 0xF2 0x16

Disable
(0x00)

***Enable**
(0x01)

Enable/Disable Bookland EAN(ISBN)

Parameter # 0x53
To enable or disable EAN Bookland, scan the appropriate barcode below.

1000231
Enable Bookland EAN
(0x01)

1000230
*** Disable Bookland EAN**
(0x00)

Code 128

Including AIM128 ,but the output type is different.

Enable/Disable Code 128

Parameter # 0x08
To enable or disable Code 128, scan the appropriate barcode below.

1000101
*** Enable Code 128**
(0x01)

1000100
Disable Code 128
(0x00)

Transmit Check Digit

Parameter # 0xF2 0x35

3030351
Enable

（0x01）

3030350

*** Disable**
（0x00）

Set Lengths for Code 128

Parameter # L1=0xF5 0x04, L2=0xF5 0x05

After enabling this setting, you can read Code128 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Code128 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 0-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

F3118485F50000005

The Length Within A Specific Range

F0118485F50000005

Any Length

GS1-128 (formerly UCC/EAN-128)

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

Parameter # 0x0E

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

1040331

*** Enable GS1-128**
(0x01)

1040330

Disable GS1-128
(0x00)

UCC/EAN-128 Transmit Check Digit

Parameter # 0xF2 0x36

3030361

Enable
（0x01）

3030360

*** Disable**
（0x00）

Set Lengths for UCC/EAN-128

Parameter # L1=0xF5 0x06, L2=0xF5 0x07

After enabling this setting, you can read UCC/EAN-128 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read UCC/EAN-128 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 0-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any Length

ISBT 128

Parameter # 0x54

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

*** Enable ISBT 128**
(0x01)

Disable ISBT 128
(0x00)

Code 39

Enable/Disable Code 39

Parameter # 0x00

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

*** Enable Code 39**
(0x01)

Disable Code 39
(0x00)

Set Lengths for Code 39

Parameter # L1 = 0x12, L2 = 0x13

After enabling this setting, you can read Code 39 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Code 39 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 0-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any Length

Code 39 Check Digit Verification

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 the 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.

Verify Code 39 Check Digit

(0x01)

1020040

*** Do Not Verify Code 39 Check Digit**
(0x00)

Transmit Code 39 Check Digit

Parameter # 0x2B

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

1020241

Transmit Code 39 Check Digit
(0x01)

Scan this symbol to transmit data without the check digit.

1020240

*** Do Not Transmit Code 39 Check Digit**
(0x00)

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 barcode below.

See ***Table 4-3*** for the mapping of Code 39 characters to ASCII values.

1020111

Enable Code 39 Full ASCII
(0x01)

1020110

*** Disable Code 39 Full ASCII**
(0x00)

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

3030300

*** Disable**
(0x00)

3030301

Enable
(0x01)

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 barcode below to enable or disable converting Code 39 to Code 32.

1020300

*** Disable**
(0x00)

1020301

Enable
(0x01)

Code 32 Prefix

Parameter # 0xE7

Enable this parameter to add the prefix character "A" to all Code 32 barcodes. Before this setting, pls enable the parameter of converting Code 39 to Code 32(Italian Pharma Code).

1020320

*** Disable**
(0x00)

1020321

Enable
(0x01)

Code 32 Check Digit Verification

Parameter # 0xF2 0x19

3030190

*** Disable**
(0x00)

3030191

Enable
(0x01)

Transmit Code 32 Check Digit

Parameter # 0xF2 0x1A

30301A0

***Transmit Check Digit**
(0x00)

30301A1

Transmit Start Character, Stop Character, Check Digit
(0x01)

Code 93

Enable/Disable Code 93

Parameter # 0x09

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

Enable Code 93
(0x01)

*** 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.Pls refer to the *Numeric Barcodes* in the appendix. To change the selection or cancel an incorrect entry, pls scan *Cancel* in appendix.

Code 93 - One Discrete Length

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. Pls refer to the *Numeric Barcodes* in the appendix. To change the selection or cancel an incorrect entry, pls scan *Cancel* in appendix.

Code 93 - Two Discrete Lengths

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). Pls refer to *Numeric Barcodes* in appendix. To change the selection or cancel an incorrect entry, pls scan *Cancel* in appendix..

Code 93 - Length Within Range

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

Code 93 - Any Length

Code 11

Enable/Disable Code 11

Parameter # 0x0A

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

Enable Code 11
(0x01)

*** Disable Code 11**
(0x00)

Set Lengths for Code 11

Parameter # L1 = 0x1C, L2 = 0x1D

After enabling this setting, you can read Code 11 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Code 11 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 0-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

F3010C0D013700012

The Length Within A Specific Range

F0010C0D013700012

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 barcode. The options are to check for one check digit, check for two check digits, or disable the feature.

To enable this feature, scan the barcode 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 Digit

Parameter # 0x2F

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

Transmit Code 11 Check Digit
(0x01)

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

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

Interleaved 2 of 5/ITF / Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

Parameter # 0x06

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

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

Disable Interleaved 2 of 5
(0x00)

Set Lengths for Interleaved 2 of 5

Parameter # L1 = 0x16, L2 = 0x17

After enabling this setting, you can read Interleaved 2 of 5 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Interleaved 2 of 5 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：

If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".

If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode Interleaved 2 of 5 code containing any characters

Note: Selecting this may result in incorrect decoding of I 2 of 5.

Any Length

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).

*** Disable**
(0x00)

Enable
(0x01)

Transmit I 2 of 5 Check Digit

Parameter # 0x2C

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

Transmit I 2 of 5 Check Digit
(0x01)

Scan this symbol to transmit data without the check digit.

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

Discrete 2 of 5/Industrial 2 of 5/IND25

Enable/Disable Discrete 2 of 5

Parameter # 0x05

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

Enable Discrete 2 of 5
(0x01)

***Disable Discrete 2 of 5**
(0x00)

Set Lengths for Discrete 2 of 5

Parameter # L1 = 0x14, L2 = 0x15

After enabling this setting, you can read Discrete 2 of 5 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Discrete 2 of 5 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：

If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".

If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode D 2 of 5 code containing any characters
Note: Selecting this may result in incorrect decoding of D 2 of 5.

Any Length

Discrete 2 of 5 Check

Parameter # 0xF2 0x48

Enable
（0x01）

*** Disable**
（0x00）

Transmit Discrete 2 of 5 Check Digit

Parameter # 0xF2 0x49

Enable
（0x01）

*** Disable**
（0x00）

Matrix 25

Enable/Disable Matrix 25

Parameter # 0xF2 0x20

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

3030201

Enable Matrix 25
(0x01)

3030200

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

Matrix 25 Check Digit Verification

Parameter # 0xF2 0x21

3030211

Enable Matrix 25 Check Digit Verification
(0x01)

3030210

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

Transmit Matrix 25 Check Digit

Parameter # 0xF2 0x22

3030221

Enable Matrix 25 Transmit Check Character
(0x01)

*** Disable Matrix 25 Transmit Check Character (0x00)**

Set Lengths for Matrix 25

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

After enabling this setting, you can read Matrix 25 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Matrix 25 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode Matrix 25 code containing any characters
Note: Selecting this may result in incorrect decoding of Matrix 25.

Any Length

Standard 25/IATA 25(Standard 25)

Enable/Disable Standard 25

Parameter # 0xF2 0x23

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

*** Disable**
(0x00)

Enable
(0x01)

Standard 25 Check Digit Verification

Parameter # 0xF2 0x24

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

Enable Standard 25 Check Digit Verification
(0x01)

Transmit Check Digit

Parameter # 0xF2 0x25

*** Disable Standard 25 Transmit Check Character**
(0x00)

Enable Standard 25 Transmit Check Character
(0x01)

Set Lengths for Standard 25

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

After enabling this setting, you can read Standard 25 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Standard 25 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode Standard 25 code containing any characters
Note: Selecting this may result in incorrect decoding of Standard 25.

Any Length

Codabar

Enable/Disable Codabar

Parameter # 0x07

To enable or disable Codabar, scan the appropriate barcode below.

Enable Codabar
(0x01)

*** Disable Codabar**
(0x00)

Set Lengths for Codabar

Parameter # L1 = 0x18, L2 = 0x19

After enabling this setting, you can read Codabar codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read Codabar codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode Codabar code containing any characters

Any Length

Codabar Check

Parameter # 0xF2 0x4C

Enable
（0x01）

*** Disable**
（0x00）

Transmit Codabar Check Digit

Parameter # 0xF2 0x4D

Enable
（0x01）

*** Disable**
（0x00）

NOTIS Editing

Parameter # 0x37

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

Enable NOTIS Editing
(0x01)

*** Disable NOTIS Editing**
(0x00)

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

***ABCD/ABCD**
(0x00)

ABCD/TN*E
(0x01)

Letter Case Setting of Start Character and Teminator

Parameter # 0xF2 0x32

*** Uppercase**
(0x00)

Lowercase
(0x01)

MSI/MSI PLESSEY

Enable/Disable MSI

Parameter # 0x0B

To enable or disable MSI, scan the appropriate barcode below.

Enable MSI
(0x01)

*** Disable MSI**
(0x00)

Set Lengths for MSI

Parameter # L1 = 0x1E, L2 = 0x1F

After enabling this setting, you can read MSI codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read MSI codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 2-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".
If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any length - scan this to decode MSI code containing any characters
Note: Selecting this may result in incorrect decoding of MSI.

Any Length

MSI Check Digits

Parameter # 0x32

These check digits at the end of the barcode are used to verify the integrity of the data. It is essential to include at least one check digit in the barcode. However, check digits are not automatically transmitted with the data during scanning.

*** One MSI Check Digit**
(0x00)

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

Two MSI Check Digit
(0x01)

Transmit MSI Check Digit

Parameter # 0x2E

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

Transmit MSI Check Digit
(0x01)

Scan this symbol to transmit data without the check digit.

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

MSI Check Digit Algorithm

Parameter # 0x33

When the Two MSI check digits option is selected, an additional verification algorithm is used to ensure the integrity of the data. You can select one of the following algorithms for this purpose:

MOD 10/ MOD 11
(0x00)

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

GS1 DataBar/RSS

Enable/Disable GS1 DataBar-14

Parameter # 0xF0 0x52

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

Enable GS1 DataBar-14
(0x01)

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

RSS AI Character

Parameter # 0xF2 0x26

*** Enable**
（0x01）

Disable
（0x00）

PDF417

Scan normal or mirror image picture.

Enable/Disable PDF417

Parameter # 0x0F

To enable or disable PDF417, scan the appropriate barcode below.

Disable PDF417
(0x00)

*** Enable PDF417**
(0x01)

Read Normal Phase/ Phase Reversal

Parameter # 0xF2 0x61

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

Read Phase Reversal
(0x01)

Read Normal Phase/ Phase Reversal
(0x02)

QR

Read normal phase/ phase reversal/ mirror image picture

Enable/Disable QR

Parameter # 0xF0 0x25
To enable or disable QR, scan the appropriate barcode below.

Disable QRCode
(0x00)

*** Enable QRCode**
(0x01)

ECI Control

Parameter # 0xF2 0x66

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

Output ECI
(0x01)

QR Read Normal Phase/ Phase Reversal

Parameter # 0xF2 0x67

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

Read Phase Reversal
(0x01)

Read Normal Phase/ Phase Reversal
(0x02)

Remove The UTF-8 BOM Encoding Format Of The QR Code

Parameter # 0xF6 0x3A

***Disable**
(0x00)

6063A01

Enable
(0x01)

Data Matrix(DM)

Scan normal or mirror image picture.

Enable/Disable Data Matrix(DM)

Parameter # 0xF0 0x24

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

1003240

Disable DataMatrix
(0x00)

1003241

*** Enable DataMatrix**
(0x01)

Read Normal Phase/ Phase Reversal

Parameter # 0xF2 0x6B

30306B0

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

30306B1

Read Phase Reversal
(0x01)

Read Normal Phase/ Phase Reversal
(0x02)

ECI Control

Parameter # 0xF2 0x6C

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

Output ECI
(0x01)

Maxi Code

Enable/Disable Maxi Code

Parameter # 0xF0 0x26

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

*** Disable MaxiCode**
(0x00)

Enable MaxiCode
(0x01)

Aztec Code

Enable/Disable Aztec Code

Parameter # 0xF0 0x28

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

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

Enable Aztec Code
(0x01)

Han Xin Code

Enable/Disable Han Xin Code

Parameter # 0xF0 0x2F

To enable or disable Han Xin Code, scan the appropriate barcode below.

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

Enable Han Xin Code
(0x01)

Read Normal Phase/ Phase Reversal

Parameter # 0xF2 0x71

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

Read Phase Reversal

(0x01)

Read Normal Phase/ Phase Reversal
(0x02)

ISSN

ISSN turns to EAN13 when it's disabled.
Parameter # 0xF2 0x33

*** Disable**
(0x00)

Enable
(0x01)

NEC-25(COOP25)

NEC-25(COOP25)

Parameter # 0xF2 0x45

Enable
（0x01）

*** Disable**
（0x00）

NEC-25(COOP25) Check

Parameter # 0xF2 0x46

Enable
（0x01）

*** Disable**
（0x00）

Transmit NEC-25(COOP25) Check Digit

Parameter # 0xF2 0x47

Enable
（0x01）

*** Disable**
（0x00）

Set Lengths for NEC-25(COOP 25)

Parameter # L1=0xF5 0x08, L2=0xF5 0x09

After enabling this setting, you can read NEC-25 codes of a specific length. Firstly, pls scan the barcode with **The Length Within A Specific Range**, then scan the four Numeric Barcodes in the appendix to set the corresponding two sets of lengths L1 and L2. L1 and L2 each have a two-digit setting code. If the exact length range is less than two digits, pls fill it with 0.

To set and read NEC-25 codes of any length, just only need to scan the setting code **Any Length**, no need to scan any digital setting code.

Default: 4-99,
setting range: 01-99.

I、When L1<L2, L1 is the minimum length and L2 is the maximum length
II、When L1>L2, L1 is the maximum length and L2 is the minimum length
III、When L1=L2, only read fixed length (L1/L2)

For example：
If you only need to read in a length range of 4-8 characters, pls scan the digital setting code "0" "4" "0" "8" or "0" "8" "0" "4".

If you only need to read a fixed length of 12 characters, pls scan the digital setting code "1" "2" "1" "2".

The Length Within A Specific Range

Any Length

COMPOSITE

Enable/Disable COMPOSITE

Parameter # 0xF2 0x17

***Disable**
(0x00)

Enable
(0x01)

4. Appendix

Table 4-1 Param Data Format

Parameter Number	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 Barcodes

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

0

1

2

3

4

5

6

7

8

9

Cancel

To change the selection or cancel an incorrect entry, scan the barcode below.

Cancel

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 barcode；
Two discrete length barcodes；

Barcodes within a range of lengths within the scan engine capability;
Any length of barcodes within the scan engine capability.
Table 4-2 lists the requirements for each option.

Table 4-2 Setting Variable Code Lengths

Code Length Option	L1 value	L2 value
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 barcode is decoded within the scan engine capability.	0x00	0x00

Character Comparison Table

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 4-3 Character Comparison Table（control character）

Scan Value	Hex Value	Character	Keyboard Function Key Operation	Keyboard Ctrl Combination Key
1000	00h	NUL	Null	CTRL 2
1001	01h	SOH	Keypad Enter	CTRL A
1002	02h	STX	Caps lock	CTRL B
1003	03h	ETX	Right Arrow	CTRL C
1004	04h	EOT	Up Arrow	CTRL D
1005	05h	ENQ	Null	CTRL E
1006	06h	ACK	Null	CTRL F
1007	07h	BEL	Enter	CTRL G
1008	08h	BS	Left Arrow	CTRL H
1009	09h	HT	Horizontal Tab	CTRL I
1010	0Ah	LF	Down Arrow	CTRL J
1011	0Bh	VT	Vertical Tab	CTRL K
1012	0Ch	FF	Delete	CTRL L
1013	0Dh	CR	Enter	CTRL M
1014	0Eh	SO	Insert	CTRL N
1015	0Fh	SI	Esc	CTRL O
1016	10h	DLE	F11	CTRL P
1017	11h	DC1	Home	CTRL Q
1018	12h	DC2	Print Screen	CTRL R
1019	13h	DC3	Backspace	CTRL S

1020	14h	DC4	tab+shift	CTRL T
1021	15h	NAK	F12	CTRL U
1022	16h	SYN	F1	CTRL V
1023	17h	ETB	F2	CTRL W
Scan Value	**Hex Value**	**Character**	**Keyboard Function Key Operation**	**Keyboard Ctrl Combination Key**
1024	18h	CAN	F3	CTRL X
1025	19h	EM	F4	CTRL Y
1026	1Ah	SUB	F5	CTRL Z
1027	1Bh	ESC	F6	CTRL [
1028	1Ch	FS	F7	CTRL \
1029	1Dh	GS	F8	CTRL]
1030	1Eh	RS	F9	CTRL 6
1031	1Fh	US	F10	CTRL -
1032	20h	(space)	Space	Space

Table4-3 Character Comparison Table（visible Character）

Scan Value	Hex Value	Keyboard Function Key Operation
1033	21h	!
1034	22h	‘
1035	23h	#
1036	24h	$
1037	25h	%
1038	26h	&
1039	27h	‘
1040	28h	(
1041	29h	)
1042	2Ah	*
1043	2Bh	+
1044	2Ch	,
1045	2Dh	-
1046	2Eh	.
1047	2Fh	/
1048	30h	0
1049	31h	1
1050	32h	2
1051	33h	3
1052	34h	4
1053	35h	5

1054	36h	6
1055	37h	7

Scan Value	Hex Value	Keyboard Function Key Operation
1056	38h	8
1057	39h	9
1058	3Ah	:
1059	3Bh	;
1060	3Ch	<
1061	3Dh	=
1062	3Eh	>
1063	3Fh	?
1064	40h	@
1065	41h	A
1066	42h	B
1067	43h	C
1068	44h	D
1069	45h	E
1070	46h	F
1071	47h	G
1072	48h	H
1073	49h	I
1074	4Ah	J
1075	4Bh	K
1076	4Ch	L
1077	4Dh	M
1078	4Eh	N
1079	4Fh	O
1080	50h	P
1081	51h	Q
1082	52h	R
1083	53h	S
1084	54h	T
1085	55h	U
1086	56h	V

Scan Value	Hex Value	Keyboard Function Key Operation
1087	57h	W
1088	58h	X
1089	59h	Y
1090	5Ah	Z
1091	5Bh	[
1092	5Ch	\
1093	5Dh	]
1094	5Eh	^
1095	5Fh	_
1096	60h	‘
1097	61h	a
1098	62h	b
1099	63h	c
1100	64h	d
1101	65h	e
1102	66h	f
1103	67h	g
1104	68h	h
1105	69h	i
1106	6Ah	j
1107	6Bh	k
1108	6Ch	l
1109	6Dh	m
1110	6Eh	n
1111	6Fh	o
1112	70h	p
1113	71h	q
1114	72h	r
1115	73h	s
1116	74h	t
1117	75h	u

Scan Value	Hex Value	Keyboard Function Key Operation
1118	76h	v
1119	77h	w
1120	78h	x
1121	79h	y
1122	7Ah	z
1123	7Bh	{
1124	7Ch	|
1125	7Dh	}
1126	7Eh	~
1127	7Fh	Undefined

Values from 1128 to 1255 can also be set. (Hex Value80h to FFh are for SSI).

Code ID

Table 4-4

Barcode Type	Code ID
Code 128	D
GS1-128(UCC/EAN-128)	K
AIM 128	D
ISBT-128	D
EAN-8	A
EAN-13	A
ISSN	L
ISBN/Bookland EAN	L
UPC-E	A
UPC-A	A
Interleaved 2 of 5/ITF	F
ITF-14	F
Deutsche Post 14	w
Deutsche Post 12	l
NEC-25(COOP 2 of 5)	o
Matrix 2 of 5	V
Industrial 2 of 5/Discrete 2 of 5/IND25	G
Standard 2 of 5 (IATA 25)	G
Code 39	B
Code 93	E
Codabar	C
Code 11	H
Plessey	J
MSI-Plessey	J
GS1-DataBar（ RSS）	R
PDF417	r
QR	q
AZTEC(Aztec Code)	a
DM(DataMatrix)	u
MaxiCode	x
Han Xin Code	c
Code 32	B
Trioptic Code 39	M
Coupon Code	N
GS1 DataBar-14	R
SETUP128	S
Veri Code	v

AIM Code Identifiers

Table 4-5

Barcode Type	AIM ID	Instruction
Code 128	]C0	Common data
GS1-128(UCC/EAN-128)	]C1	FNC1 in the first code word position.
AIM 128	]C2	FNC1 in the second code word position.
ISBT-128	]C0	
EAN-8	]E4	Common data
	]E4...]E1...	Add 2-bit additional code
	]E4...]E2...	Add 5-bit additional code
EAN-13	]E0	Common data
	]E3	Add 2/5-bit additional code
ISSN	]X0	Common data
ISBN/Bookland EAN	]X0	Common data
UPC-E	]E0	Common data
	]E3	Add 2/5-bit additional code
UPC-A	]E0	Common data
	]E3	Add 2/5-bit additional code
Interleaved 2 of 5/ITF	]I0	Common data
	]I1	Check and output check character
	]I3	Check but don't output check character
ITF-14	]I1	Output check character
	]I3	Not output check character
Deutsche Post 14	]X0	Common data
Deutsche Post 12	]X0	Common data
NEC-25(COOP 2 of 5)	]X0	Common data
Matrix 2 of 5	]X0	Common data
Industrial 2 of 5/ Discrete 2 of 5/IND25	]S0	Common data
Standard 2 of 5 (IATA 25)	]R0	Common data
Code 39	]A0	Common data
	]A1	MOD43 Check and output check character
	]A3	MOD43 Check but don't output check character
	]A4	Full ASCII expand,but don't check.
	]A5	Full ASCII expand,and output check character
	]A7	Full ASCII expand,but don't output check character
Code 93	]G0	Common data
Codabar	]F0	Common data
	]F2	Check and output check character
	]F4	Check but don't output check character
Code 11	]H3	Common data
	]H0	MOD11 single character check, and output check character.
	]H3	MOD11 single character check, but don't output check character.
Plessey	]P0	Common data
MSI-Plessey	]M0	Common data
	]M0	MOD10 check and output check character
	]M1	MOD10 check but don't output check character
GS1-DataBar（ RSS）	]e0	Standard data packet
PDF417	]L0	No options specified at this time. Always transmit 3.
QR	]Q0	QR barcode Mode1（conform AIM ISS 97-001 ）
	]Q1	QR barcode Mode2 (2005 symbol) ,do not use the ECI protocol
	]Q2	QR barcode Mode2(2005 symbol), Use the ECI protocol

	]Q3	QR barcode Mode2 (2005 symbol),do not use the ECI protocol，FNC1 is in the first place
	]Q4	QR barcode Mode2 (2005 symbol),use the ECI protocol , FNC1 is in the first place
	]Q5	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.
Han Xin Code	]X0	No options specified at this time. Always transmit 3.

5. Parameter Command

The serial commands can be used to program the barcode scanner. For complete descriptions and examples of each serial programming command, pls refer to the corresponding command codes below.

When programming the scanner through command, a serial tool is needed. Before connecting the scanner, pls ensure the COM configuration is correct. The default COM configure should be: Baudrate - 9600, databits - 8, stopbits - 1, paritybit - NONE. Then connect the scanner and input the command directly, finally sending it through HEX, the scanner will be programmed.

Table 4-6

Name	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
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
PARAM_SEND	Listed in the following table
REQUEST_REVISION	04 A3 04 00 FF 55
REPLY_REVISION	None
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
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 4-7

Parameter Name	Parameter Values	Default Values	Command	Command Inquiry
Duration in Scanning	0x88	3.0 sec.	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
Duration in Scanning Quick Setting	0xF2 0xCF		Infinite Time： 08 C6 04 08 00 F2 CF 00 FD 65 last 3s： 08 C6 04 08 00 F2 CF 03 FD 62 last 5s： 08 C6 04 08 00 F2 CF 05 FD 60 last 10s： 08 C6 04 08 00 F2 CF 0A	06 C7 04 00 F2 CF FD 6E

			FD 5B last 15s： 08 C6 04 08 00 F2 CF 0B FD 5A last 20s： 08 C6 04 08 00 F2 CF 0C FD 59 last 30s： 08 C6 04 08 00 F2 CF 0D FD 58 last 60s： 08 C6 04 08 00 F2 CF 0E FD 57	
Disable/Enable Modbus Rtu Function	0xF6 0x43	0： Disable	*Disable：08 C6 04 08 00 F6 43 00 FD ED Enable：08 C6 04 08 00 F6 43 01 FD EC	06 C7 04 00 F6 43 FD F6
Barcode Cache	0xF6 0x44	0： *Direct Output (Modebus Rtu Format)	*Direct Output (ModebusRtu Format)： 08 C6 04 08 00 F6 44 00 FD EC Cache： 08 C6 04 08 00 F6 44 01 FD EB	06 C7 04 00 F6 44 FD F5
Slave Address Setting	0xF3 0x33			06 C7 04 00 F3 33 FE 09
Quickly Set The Slave Address	0xF6 0x43	0： *Address 0x00	*Address 0x00：08 C6 04 08 00 F6 43 00 FD ED Address 0x01：08 C6 04 08 00 F6 43 01 FD EC Address 0x02：08 C6 04 08 00 F6 43 02 FD EB Address 0x03：08 C6 04 08 00 F6 43 03 FD EA Address 0xAA：08 C6 04 08 00 F6 43 AA FD 43 Address 0xBB：08 C6 04 08 00 F6 43 BB FD 32	06 C7 04 00 F6 43 FD F6
Power Mode	0x80	0x01:Low Power	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
Scan Mode	0x8A	0x00： Level	Continuous：07 C6 04 08 00 8A 04 FE 99 Level Mode / Command trigger mode：07 C6 04 08 00 8A 08 FE 95 Sense Mode: 07 C6 04 08 00 8A 09 FE 94	05 C7 04 00 8A FE A6
Continuous Reading Interval	0x89	0.5s	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	0x8C	0x00: High	Low：07 C6 04 08 00 8C 02 FE 99 Medium: 07 C6 04 08 00 8C 01 FE 9A High: 07 C6 04 08 00 8C 00 FE 9B Mute: 07 C6 04 08 00 8C 03 FE 98	05 C7 04 00 8C FE A4
Beeper Type	0xF2 0xD8	0x00： Passive	* Passive Beeper: 08 C6 04 08 00 F2 D8 00 FD 5C	06 C7 04 00 F2 D8 FD 65

		Beeper	Active Beeper: 08 C6 04 08 00 F2 D8 01 FD 5B	
Beep After Good Decode	0x38	1：Enable	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	0xF2 0x05	*0x00：Disable #0x01：CR LF &0x01：CR LF %0x02：CR	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	0xF2 0x0A	0x00：Good Decode	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	0xF2 0x0B	1：Enable	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
Decode Indicator Control	0xF2 0xCB	0：Mode 0	Mode 0: 08 C6 04 08 00 F2 CB 00 FD 69 Mode 1: 08 C6 04 08 00 F2 CB 01 FD 68 Mode 2: 08 C6 04 08 00 F2 CB 02 FD 67 Mode 3: 08 C6 04 08 00 F2 CB 03 FD 66	06 C7 04 00 F2 CB FD 72
Mute	0xF2 0x0C	0：Disable	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	0xF2 0x0D	1：Enable	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	0xF2 0x0E	1：Enable	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	0x5E	0x00:Disable No Read	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	0xEC	1：Enable	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	0xF1 0x71	0：Disable	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	0x4E	0x01:Linear Security Level 1	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	0xF2 0x08	0： Disable	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	0xF2 0xAA	0:Special Invoice	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	0x2D	0(None)	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 Suffix1 Suffix2	 0x69 0x68 0x6A	 0x00 0x0A 0x0D	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
Scan Data Transmition Format	0xEB	0x00(Data Only)	Data：07 C6 04 08 00 EB 00 FE 3C Data+Suffix1：07 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	0x9C	0x06:9600	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
Data Bit	0xA0	0x03: 8 Data Bits	7 Data Bits: 07 C6 04 08 00 A0 02 FE 85 8 Data Bits: 07 C6 04 08 00 A0 03 FE 84	05 C7 04 00 A0 FE 90

Parity	0x9E	0x04:None	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	0x9F	1：Enable	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	0xEE	0：Disable	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	0x9B	2s	0.1s: 07 C6 04 08 00 9B 01 FE 8B	05 C7 04 00 9B FE 95
Stop Bit Select	0x9D	0x01(1 Stop Bit)	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	0x6E	0	1s: 07 C6 04 08 00 6E 01 FE B8	05 C7 04 00 6E FE C2
Host Character Time-out	0xEF	200ms	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	0xF2 0x01	0(Serial Port)	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
Floodlight Control	0xF2 0x02	0(Lighting when Read)	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	0xF2 0x03	0(Lighting when Read)	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
Positioning light Flicker	0xF2 0xB8	0x00: Flicker	*Flicker: 08 C6 04 08 00 F2 B8 00 FD 7C No Flicker: 08 C6 04 08 00 F2 B8 01 FD 7B	06 C7 04 00 F2 B8 FD 85

Sensitivity Level	0xF2 0x04	1(High Sensitivity)	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	0xF3 0x01	1	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	0xF3 0x02	0.5s	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
Same code reading delay	0xF3 0x03	0.5s	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
Support GS1 Rules And Use Parentheses To Include AI Fields	0xF6 0x3C	0：Disable	*Disable：08 C6 04 08 00 F6 3C 00 FD F4 Enable：08 C6 04 08 00 F6 3C 01 FD F3	06 C7 04 00 F6 3C FD FD
Convert To Hexadecimal Output	0xF6 0x41	0：*Disable	*Disable：08 C6 04 08 00 F6 41 00 FD EF Hexadecimal Uppercase：08 C6 04 08 00 F6 41 01 FD EE Hexadecimal Lowercase：08 C6 04 08 00 F6 41 02 FD ED	06 C7 04 00 F6 41 FD F8
Convert To Hexadecimal Interval Output	0xF6 0x42	0：*Disable Interval	*Disable Interval：08 C6 04 08 00 F6 42 00 FD EE Space：08 C6 04 08 00 F6 42 01 FD ED	06 C7 04 00 F6 42 FD F7
1D inverse barcode reading	0xF2 0x91	0：Disable	Disable：08 C6 04 08 00 F2 91 00 FD A3 Enable：08 C6 04 08 00 F2 91 01 FD A2	06 C7 04 00 F2 91 FD AC
Output Character Set Type	0xF2 0x06	0：Primitive Type	*Primitive type：08 C6 04 08 00 F2 06 00 FE 2E GBK(GB2312)：08 C6 04 08 00 F2 06 01 FE 2D UTF8：08 C6 04 08 00 F2 06 02 FE 2C EUC-KR Korean (valid for special version)：08 C6 04 08 00 F2 06 03 FE 2B DEC MCS：08 C6 04 08 00 F2 06 04 FE 2A BIG5：08 C6 04 08 00 F2 06 05 FE 29	06 C7 04 00 F2 06 FE 37

Input Character Set Type	0xF2 0xAB	0：AUTO	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 Japanese:08 C6 04 08 00 F2 AB 04 FD 85 Korean:08 C6 04 08 00 F2 AB 05 FD 84 DEC Multinational Character Set (MCS): 08 C6 04 08 00 F2 AB 06 FD 83 ISO8859-1 Character Set: 08 C6 04 08 00 F2 AB 07 FD 82 Japanese Single Byte (valid for special version): 08 C6 04 08 00 F2 AB 08 FD 81 Cyrillic Character Set（Windows 1251）：08 C6 04 08 00 F2 AB 09 FD 80 KOI8-R Character Set：08 C6 04 08 00 F2 AB 0A FD 7F BIG5 Character Set：08 C6 04 08 00 F2 AB 0B FD 7E ISO8859-2 Character Set：08 C6 04 08 00 F2 AB 0C FD 7D	06 C7 04 00 F2 AB FD 92
USB Type	0xF2 0x0F	0: USB1.1(Full Speed)	USB1.1 (Full Speed): 08 C6 04 08 00 F2 0F 00 FE 25 USB2.0 (High Speed) 08 C6 04 08 00 F2 0F 01 FE 24	06 C7 04 00 F2 0F FE 2E
Country/Language Keyboard	0xF6 0x01	1：American Keyboard	America: 08 C6 04 08 00 F6 01 01 FE 2E Belgium: 08 C6 04 08 00 F6 01 02 FE 2D Brazil（ABNT2）：08 C6 04 08 00 F6 01 03 FE 2C Denmark: 08 C6 04 08 00 F6 01 06 FE 29 Finland: 08 C6 04 08 00 F6 01 07 FE 28 France: 08 C6 04 08 00 F6 01 08 FE 27 Austria、Germany: 08 C6 04 08 00 F6 01 09 FE 26 Greece：08 C6 04 08 00 F6 01 0A FE 25 Hungary：08 C6 04 08 00 F6 01 0B FE 24 Italy: 08 C6 04 08 00 F6 01 0D FE 22 Netherlands：08 C6 04 08 00 F6 01	06 C7 04 00 F6 01 FE 38

			0F FE 20 Norway: 08 C6 04 08 00 F6 01 10 FE 1F Poland：08 C6 04 08 00 F6 01 11 FE 1E Portugal: 08 C6 04 08 00 F6 01 12 FE 1D Romania (standard)：08 C6 04 08 00 F6 01 13 FE 1C Russia: 08 C6 04 08 00 F6 01 14 FE 1B Slovakia: 08 C6 04 08 00 F6 01 15 FE 1A Spain: 08 C6 04 08 00 F6 01 16 FE 19 Sweden: 08 C6 04 08 00 F6 01 17 FE 18 Turkey_F: 08 C6 04 08 00 F6 01 19 FE 16 Turkey_Q: 08 C6 04 08 00 F6 01 1A FE 15 England: 08 C6 04 08 00 F6 01 1B FE 14 Japan: 08 C6 04 08 00 F6 01 1C FE 13 Chech: 08 C6 04 08 00 F6 01 1D FE 12 Thailand Kedmanee：08 C6 04 08 00 F6 01 1E FE 11 Ukraine：08 C6 04 08 00 F6 01 1F FE 10 Arabic_101：08 C6 04 08 00 F6 01 20 FE 0F Croatia：08 C6 04 08 00 F6 01 21 FE 0E Korea：08 C6 04 08 00 F6 01 22 FE 0D Bulgaria：08 C6 04 08 00 F6 01 23 FE 0C Multi-country Common: 08 C6 04 08 00 F6 01 24 FE 0B Vietnam：08 C6 04 08 00 F6 01 25 FE 0A	
Time interval that keyboard outputs character	0xF3 0x04	5ms	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	0xF2 0xB2		0ms: 08 C6 04 08 00 F2 B2 00 FD 82 5ms:08 C6 04 08 00 F2 B2 03 FD 7F 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	0xF2 0xA1	0：Normal Letter Case	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	06 C7 04 00 F2 A1 FD 9C

			All Lowercase: 08 C6 04 08 00 F2 A1 02 FD 91 Case Inversion: 08 C6 04 08 00 F2 A1 03 FD 90	
Keyboard Type	0xF2 0xB4	0：Standard Keyboard	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
STX and ETX Setting	0xF2 0XB7	0：Disable	Disable：08 C6 04 08 00 F2 B7 00 FD 7D STX(Prefix)：08 C6 04 08 00 F2 B7 01 FD 7C ETX(Suffix 1)：08 C6 04 08 00 F2 B7 02 FD 7B STX(Prefix)+ ETX(Suffix 1)：08 C6 04 08 00 F2 B7 03 FD 7A	06 C7 04 00 F2 B7 FD 86
Suffix Alt Key Combination	0xF6 0x2B	0：Disable	*Disable：08 C6 04 08 00 F6 2B 00 FE 05 Enable：08 C6 04 08 00 F6 2B 01 FE 04	06 C7 04 00 F6 2B FE 0E
Suffix Ctrl Key Combination	0xF6 0x2C	0：Disable	*Disable：08 C6 04 08 00 F6 2C 00 FE 04 Enable：08 C6 04 08 00 F6 2C 01 FE 03	06 C7 04 00 F6 2C FE 0D
Suffix Shift Key Combination	0xF6 0x2D	0：Disable	*Disable：08 C6 04 08 00 F6 2D 00 FE 03 Enable：08 C6 04 08 00 F6 2D 01 FE 02	06 C7 04 00 F6 2D FE 0C
Suffix And Terminator Are Not Affected By The Output Mode Of ASCII Control Characters	0xF6 0x49	0：Disable	*Disable：08 C6 04 08 00 F6 49 00 FD E7 Enable：08 C6 04 08 00 F6 49 01 FD E6	06 C7 04 00 F6 49 FD F0
Keyboard State Control	0xF2 0XB9	1：Enable	Disable：08 C6 04 08 00 F2 B9 00 FD 7B Enable：08 C6 04 08 00 F2 B9 01 FD 7A	06 C7 04 00 F2 B9 FD 84
ASCII Control Character Output Mode Selection	0xF2 0xAD		Output Function Key:08 C6 04 08 00 F2 AD 00 FD 87 Output Ctrl Combination Key:08 C6 04 08 00 F2 AD 01 FD 86 ALT Mode Output Control Character:08 C6 04 08 00 F2 AD 02 FD 85 Output Enter、DownArrow:08 C6 04 08 00 F2 AD 03 FD 84 Output CTRL+key combination, but not including the keys on the keyboard: 08 C6 04 08 00 F2 AD 04 FD 83	06 C7 04 00 F2 AD FD 90

Boot Event	0xF2 0xA2	0：Disable	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	0xF2 0xA3	0：Disable	Disable: 08 C6 04 08 00 F2 A3 00 FD 91 Enable: 08 C6 04 08 00 F2 A3 01 FD 90 Enable GPIO Pin Event: 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	06 C7 04 00 F2 A3 FD 9A
Enable Setting Code Password Mode	0xF2 0xA7	0：Disable	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	0xF3 0x05		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	0xF3 0x06		New Password 68: 08 C6 04 08 00 F3 06 68 FD C5 New Password 96: 08 C6 04 08 00 F3 06 96 FD 97	06 C7 04 00 F3 06 FE 36
Logout Password	0xF2 0xA9		08 C6 04 08 00 F2 A9 00 FD 8B	06 C7 04 00 F2 A9 FD 94
Disable passive trigger scanning	0xF2 0xA8	0：Disable	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	0xF2 0x11		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	0xF2 0x50		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	0xF2 0x90		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
Hide Head Data	0xF2 0xC6	0：Disable	Disable：08 C6 04 08 00 F2 C6 00 FD 6E Enable：08 C6 04 08 00 F2 C6 01 FD 6D	06 C7 04 00 F2 C6 FD 77
Hide Intermediate Data	0xF2 0xC7	0：Disable	Disable：08 C6 04 08 00 F2 C7 00 FD 6D Enable：08 C6 04 08 00 F2 C7 01 FD 6C	06 C7 04 00 F2 C7 FD 76
Hide Tail Data	0xF2 0xC8	0：Disable	Disable：08 C6 04 08 00 F2 C8 00 FD 6C Enable：08 C6 04 08 00 F2 C8 01 FD	06 C7 04 00 F2 C8 FD 75

			6B	
Reserve Header Data	0xF6 0x62	0：Disable	*Disable：08 C6 04 08 00 F6 62 00 FD CE Enable：08 C6 04 08 00 F6 62 01 FD CD	06 C7 04 00 F6 62 FD D7
Set The Length Of The Reserved Header Data	0xF3 0x35			06 C7 04 00 F3 35 FE 07
Quickly Set The Length Of The Reserved Header Data	0xF8 0x28		Reserve 1 Byte Of Header Data：09 C6 04 08 00 F8 28 00 01 FE 04 Reserve 9999 Bytes Of Header Data：09 C6 04 08 00 F8 28 27 0F FD CF Reserve 65535 Bytes Of Header Data：09 C6 04 08 00 F8 28 FF FF FC 07	06 C7 04 00 F8 28 FE 0F
Reserve Middle Data	0xF6 0x63	0：Disable	*Disable：08 C6 04 08 00 F6 63 00 FD CD Enable：08 C6 04 08 00 F6 63 01 FD CC	06 C7 04 00 F6 63 FD D6
Set The Starting Position To Reserve Middle Data	0xF3 0x36			06 C7 04 00 F3 36 FE 06
Quickly Set The Starting Position To Reserve Middle Data	0xF8 0x29		Reserve The Data After The First Byte：09 C6 04 08 00 F8 29 00 01 FE 03 Reserve The Data After The 9999th Byte：09 C6 04 08 00 F8 29 27 0F FD CE Reserve The Data After The 65535th Byte：09 C6 04 08 00 F8 29 FF FF FC 06	06 C7 04 00 F8 29 FE 0E
Set The Length Of The Reserved Middle Data	0xF3 0x37			06 C7 04 00 F3 37 FE 05
Quickly Set The Length Of The Reserved Middle Data	0xF8 0x2A		1 Byte Of Data After The Start Position Is Reserved：09 C6 04 08 00 F8 2A 00 01 FE 02 9999 Bytes Of Data After The Start Position Are Reserved：09 C6 04 08 00 F8 2A 27 0F FD CD 65535 Bytes Of Data After The Start Position Are Reserved：09 C6 04 08 00 F8 2A FF FF FC 05	06 C7 04 00 F8 2A FE 0D
Reserve Tail Data	0xF6 0x64	0: Disable	*Disable：08 C6 04 08 00 F6 64 00 FD CC Enable：08 C6 04 08 00 F6 64 01 FD CB	06 C7 04 00 F6 64 FD D5

Set The Length Of The Reserved Tail Data	0xF3 0x38			06 C7 04 00 F3 38 FE 04
Quickly Set The Length Of The Reserved Tail Data	0xF8 0x2B		Reserve 1 Byte Of Tail Data：09 C6 04 08 00 F8 2B 00 01 FE 01 Reserve 9999 Bytes Of Tail Data：09 C6 04 08 00 F8 2B 27 0F FD CC Reserve 65535 Bytes Of Tail Data：09 C6 04 08 00 F8 2B FF FF FC 04	06 C7 04 00 F8 2B FE 0C
Enable/Disable Hide The Customized Data String In The Barcode	0xF6 0x68	0: Disable	*Disable：08 C6 04 08 00 F6 68 00 FD C8 Enable：08 C6 04 08 00 F6 68 01 FD C7	06 C7 04 00 F6 68 FD D1
Set The Hidden Data String	0xF3 0x2A			06 C7 04 00 F3 2A FE 12
Read Back And Clear	0xF6 0x69		Read Back The Set Content：08 C6 04 08 00 F6 69 00 FD C7 Clear The Set Content：08 C6 04 08 00 F6 69 01 FD C6	06 C7 04 00 F6 69 FD D0
Enable/Disable Insert Custom Data	0xF2 0xDE	0: Disable	Disable：08 C6 04 08 00 F2 DE 00 FD 56 Enable：08 C6 04 08 00 F2 DE 01 FD 55	06 C7 04 00 F2 DE FD 5F
Same code reading delay	0xF3 0x03	0.5s	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
Fast Setting	0xF2 0xC9		No Delay：08 C6 04 08 00 F2 C9 00 FD 6B Delay 1s：08 C6 04 08 00 F2 C9 01 FD 6A Delay 3s：08 C6 04 08 00 F2 C9 03 FD 68 Delay 5s：08 C6 04 08 00 F2 C9 05 FD 66 Delay 7s：08 C6 04 08 00 F2 C9 07 FD 64 Infinite Delay(Disable Same code reading delay)：08 C6 04 08 00 F2 C9 09 FD 62	06 C7 04 00 F2 C9 FD 74
Continue Scanning	0xF6 0x39	0：Disable	*Disable：08 C6 04 08 00 F6 39 00 FD F7 Enable：08 C6 04 08 00 F6 39 01 FD F6	06 C7 04 00 F6 39 FE 00
The Same Code Is Not Output In a Single Round	0xF6 0x6B	0：Disable	*Disable：08 C6 04 08 00 F6 6B 00 FD C5 Enable：08 C6 04 08 00 F6 6B 01 FD	06 C7 04 00 F6 6B FD CE

Of Decoding			C4	
Continuously Set Multiple Prefix	0xF3 0x10		Continuously Set Multiple Prefix：08 C6 04 08 00 F3 10 00 FE 23	06 C7 04 00 F3 10 FE 2C
Quickly Set Multiple Prefixes	0xF8 0x14			06 C7 04 00 F8 14 FE 23
Continuously Set Multiple Suffixes	0xF3 0x11		Continuously Set Multiple Suffix：08 C6 04 08 00 F3 11 00 FE 22	06 C7 04 00 F3 11 FE 2B
Quickly Set Multiple Suffixes	0xF8 0x15			06 C7 04 00 F8 15 FE 22
Complete Continuous Setup of Multiple Prefixes / Suffixes	0xFF 0XF6		Complete Continuous Setup of Multiple Prefixes / Suffixes：08 C6 04 08 00 FF F6 00 FD 31	06 C7 04 00 FF F6 FD 3A
Set Multiple Prefix and Suffix Data Transmission Format	0xEB		Data + Multiple Suffixes：07 C6 04 08 00 EB 08 FE 34 Multiple Prefixes+Data：07 C6 04 08 00 EB 09 FE 33 Multiple Prefixes+Data+Multiple Suffixes：07 C6 04 08 00 EB 0A FE 32	05 C7 04 00 EB FE 45
Heartbeat Control	0xF2 0xCD	0：Disable	Disable：08 C6 04 08 00 F2 CD 00 FD 67 ACK Heartbeat doesn't need ACK：08 C6 04 08 00 F2 CD 01 FD 66 ACK Heartbeat needs ACK：08 C6 04 08 00 F2 CD 02 FD 65	06 C7 04 00 F2 CD FD 70
URL Blocking	0xF2 0xEa	0：Disable	Disable：08 C6 04 08 00 F2 EA 00 FD 4A Enable：08 C6 04 08 00 F2 EA 01 FD 49	06 C7 04 00 F2 EA FD 53
About 1D Barcode(only for 1D)				
UPC-A				
Scan	0x01	1：Enable	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	0x28	1：Enable	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
Preamble	0x22	0x01: System Character	None(00)：07 C6 04 08 00 22 00 FF 05 System Character（01）：07 C6 04 08 00 22 01 FF 04 Country Character & System Character(02)：07 C6 04 08 00 22 02 FF 03	05 C7 04 00 22 FF 0E
UPC-A 2-bits Supplemental	0xF2 0x40	0：Disable	Enable：08 C6 04 08 00 F2 40 01 FD F3 Disable：08 C6 04 08 00 F2 40 00 FD	06 C7 04 00 F2 40 FD FD

			F4	
UPC-A 5-bits Supplemental	0xF2 0x41	0：Disable	Enable：08 C6 04 08 00 F2 41 01 FD F2 Disable：08 C6 04 08 00 F2 41 00 FD F3	06 C7 04 00 F2 41 FD FC
UPC-A Read Supplementals	0xF2 0x42	0：Disable	Enable：08 C6 04 08 00 F2 42 01 FD F1 Disable：08 C6 04 08 00 F2 42 00 FD F2	06 C7 04 00 F2 42 FD FB
UPC-E				
Scan	0x02	1：Enable	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	0x29	1：Enable	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
Preamble	0x23	0x01: System Character	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	0x25	0：Disable	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
UPC-E 2-bits Supplemental	0xF2 0x3D	0：Disable	Enable：08 C6 04 08 00 F2 3D 01 FD F6 Disable：08 C6 04 08 00 F2 3D 00 FD F7	06 C7 04 00 F2 3D FE 00
UPC-E 5-bits Supplemental	0xF2 0x3E	0：Disable	Enable：08 C6 04 08 00 F2 3E 01 FD F5 Disable：08 C6 04 08 00 F2 3E 00 FD F6	06 C7 04 00 F2 3E FD FF
UPC-E Read Supplementals	0xF2 0x3F	0：Disable	Enable：08 C6 04 08 00 F2 3F 01 FD F4 Disable：08 C6 04 08 00 F2 3F 00 FD F5	06 C7 04 00 F2 3F FD FE
UPC-E1	0xF2 0x15	0：Disable	Disable：08 C6 04 08 00 F2 15 00 FE 1F Enable：08 C6 04 08 00 F2 15 01 FE 1E	06 C7 04 00 F2 15 FE 28
EAN-8				
Scan	0x04	1：Enable	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
EAN-8 is expanded to EAN-13	0x27	0：Disable	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
2-bits Supplemental	0xF2 0x37	0：Disable	Enable：08 C6 04 08 00 F2 37 01 FD FC Disable：08 C6 04 08 00 F2 37 00 FD FD	06 C7 04 00 F2 37 FE 06

5-bits Supplemental	0xF2 0x38	0：Disable	Enable：08 C6 04 08 00 F2 38 01 FD FB Disable：08 C6 04 08 00 F2 38 00 FD FC	06 C7 04 00 F2 38 FE 05
Read Supplementals	0xF2 0x39	0：Disable	Enable：08 C6 04 08 00 F2 39 01 FD FA Disable：08 C6 04 08 00 F2 39 00 FD FB	06 C7 04 00 F2 39 FE 04
EAN-8 Transmit Check Digit	0xF2 0x80	1：Enable	Disable：08 C6 04 08 00 F2 80 00 FD B4 Enable：08 C6 04 08 00 F2 80 01 FD B3	06 C7 04 00 F2 80 FD BD
EAN-13				
Scan	0x03	1：Enable	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
EAN-13 2-bits Supplemental	0xF2 0x3A	0：Disable	Enable：08 C6 04 08 00 F2 3A 01 FD F9 Disable：08 C6 04 08 00 F2 3A 00 FD FA	06 C7 04 00 F2 3A FE 03
EAN-13 5-bits Supplemental	0xF2 0x3B	0：Disable	Enable：08 C6 04 08 00 F2 3B 01 FD F8 Disable：08 C6 04 08 00 F2 3B 00 FD F9	06 C7 04 00 F2 3B FE 02
EAN-13 Read Supplementals	0xF2 0x3C	0：Disable	Enable：08 C6 04 08 00 F2 3C 01 FD F7 Disable：08 C6 04 08 00 F2 3C 00 FD F8	06 C7 04 00 F2 3C FE 01
EAN-13 Transmit Check Digit	0xF2 0x16	1：Enable	Disable：08 C6 04 08 00 F2 16 00 FE 1E Enable：08 C6 04 08 00 F2 16 01 FE 1D	06 C7 04 00 F2 16 FE 27
Bookland EAN(ISBN)				
Scan	0x53	0：Disable	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
Code 128 Symbologies Switch	0x08	1：Enable	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
Transmit Code 128 Check Digit	0xF2 0x35	0：Disable	Enable：08 C6 04 08 00 F2 35 01 FD FE Disable：08 C6 04 08 00 F2 35 00 FD FF	06 C7 04 00 F2 35 FE 08
Set Lengths for Code 128	L1=0xF5 0x04, L2=0xF5 0x05			08 C7 04 00 F5 04 F5 05 FD 3A
GS1-128 (formerly UCC/EAN-128)	0x0E	1：Enable	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
Transmit UCC/EAN-12	0xF2 0x36	0：Disable	Enable：08 C6 04 08 00 F2 36 01 FD FD	06 C7 04 00 F2 36 FE 07

8 Check Digit			Disable：08 C6 04 08 00 F2 36 00 FD FE	
Set Lengths for UCC/EAN-128	L1=0xF5 0x06, L2=0xF5 0x07			08 C7 04 00 F5 06 F5 07 FD 36
ISBT 128	0x54	1：Enable	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	0x00	1：Enable	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	0x12(L1) 0x13(L2)	2 55	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： 09 C6 04 08 00 12 04 13 02 FE FA 16 and 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	06 C7 04 00 12 13 FF 0A
Code 39 Check Digit Verification	0x30	0：Disable	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	0x2B	0：Disable	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	0x11	0：Disable	07 C6 04 08 00 11 01 FF 15	05 C7 04 00 11 FF 1F
Code 39 Transport Start Character and Terminator	0xF2 0x30	0：Disable	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	0x56	0：Disable	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

Pharma Code)				
Code 32 Prefix	0xE7	0：Disable	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 32 Check Digit Verification	0xF2 0x19	0：Disable	Disable: 08 C6 04 08 00 F2 19 00 FE 1B Enable: 08 C6 04 08 00 F2 19 01 FE 1A	06 C7 04 00 F2 19 FE 24
Transmit Code 32 Check Digit	0xF2 0x1A	0：Transmit Check Digit	Transmit Check Digit: 08 C6 04 08 00 F2 1A 00 FE 1A Transmit Start Character, Stop Character, Check Digit: 08 C6 04 08 00 F2 1A 01 FE 19	06 C7 04 00 F2 1A FE 23
Code 93				
Code 93	0x09	0：Disable	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	0x1A(L1) 0x1B(L2)	4 55	One Discrete Length： 04：09 C6 04 08 00 1A 041B 00 FE EC Two Discrete Lengths： 04 and 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	0x0A	0：Disable	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	0x1C(L1) 0x1D(L2)	4 55	One Discrete Length： 06：09 C6 04 08 00 1C 06 1D 00 FE E6 Two Discrete Lengths： 04 and 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	0x34	0：Disable	None：07 C6 04 08 00 34 00 FE F3 1 bit：07 C6 04 08 00 34 01 FE F2 2 bits：07 C6 04 08 00 34 02 FE F1	05 C7 04 00 34 FE FC
Transmit Code 11 Check Digit	0x2F	0：Disable	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/Interleaved 2 of 5				
Enable Interleaved 2 of 5/ITF/	0x06	1：Enable	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				
Set Scanning Data Lengths for Interleaved 2 of 5	0x16 0x17	14 14	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	0x31	0： Disable	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	0x2C	0： Disable	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	0x05	0： Disable	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 for Discrete 2 of 5	0x14 0x15	12	One Discrete Length： 06：09 C6 04 08 00 14 06 15 00 FE F6 Two Discrete Lengths： 04 and 06 04 and 06：09 C6 04 08 00 14 06 15 04 FE F2 Length Within Range： 04 to 09 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	06 C7 04 00 14 15 FF 06
Discrete 2 of 5 Check	0xF2 0x48	0： Disable	Enable：08 C6 04 08 00 F2 48 01 FD EB Disable：08 C6 04 08 00 F2 48 00 FD EC	06 C7 04 00 F2 48 FD F5
Transmit Discrete 2 of 5 Check Digit	0xF2 0x49	0： Disable	Enable：08 C6 04 08 00 F2 49 01 FD EA Disable：08 C6 04 08 00 F2 49 00 FD EB	06 C7 04 00 F2 49 FD F4
Matrix 25				
Matrix 25	0xF2 0x20	0： Disable	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	0xF2 0x21	0： Disable	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

Transmit Matrix 25 Check Character	0xF2 0x22	0：Disable	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	L1=0xF5 0x00, L2=0xF5 0x01	12	One Discrete Length： 06：0B C6 04 08 00 F5 00 06 F5 01 00 FD 32 Two Discrete Lengths： 04 and 06　04 and 06：0B C6 04 08 00 F5 00 06 F5 01 04 FD 2E Length Within Range: 04 to 09　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	0xF2 0x23	0：Disable	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	0xF2 0x24	0：Disable	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 Digit	0xF2 0x25	0：Disable	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	L1=0xF5 0x02, L2=0xF5 0x03	12	One Discrete Length： 06：09 C6 04 08 00 F5 02 06 F5 03 00 FD 2E Two Discrete Lengths： 04 and 06　04 and 06：09 C6 04 08 00 F5 02 06 F5 03 04 FD 2A Length Within Range: 04 to 09　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	08 C7 04 00 F5 02 F5 03 FD 3E
Enable Codabar Barcode Scanning	0x07	0：Disable	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	0x18(L1) 0x19(L2)	5 55	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　04 to 09：09 C6 04 08 00 18 04 19 09 FE E7	06 C7 04 00 18 19 FE FE

			Any Length：09 C6 04 08 00 18 00 19 00 FE F4	
Codabar Check	0xF2 0x4C	0：Disable	Enable：08 C6 04 08 00 F2 4C 01 FD E7 Disable：08 C6 04 08 00 F2 4C 00 FD E8	06 C7 04 00 F2 4C FD F1
Transmit Codabar Check Digit	0xF2 0x4D	0：Disable	Enable：08 C6 04 08 00 F2 4D 01 FD E6 Disable：08 C6 04 08 00 F2 4D 00 FD E7	06 C7 04 00 F2 4D FD F0
NOTIS Transmit Format	0x37	0：Disable	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 Format	0xF2 0x31	0：ABCD/ABCD	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 Teminator	0xF2 0x32	0：Uppercase	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	0x0B	0：Disable	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	0x1E(L1) 0x1F(L2)	6 55	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	0x32	0 (One 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	0x2E	0：Disable	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 Algorithm	0x33	1(Mod 10/Mod 10)	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	0xF0 0x52	0：Disable	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
RSS AI	0xF2 0x26	1：	Enable：08 C6 04 08 00 F2 26 01 FE	06 C7 04 00 F2 26 FE 17

Character		Enable	0D Disable：08 C6 04 08 00 F2 26 00 FE 0E	
About 2D Barcode(only for 2D)				
PDF417				
PDF417	0x0F	1：Enable	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 Normal Phase/ Phase Reversal	0xF2 0x61	0：Read Normal Phase	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	F0h 25h	1：Enable	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
ECI Control	0xF2 0x66	0：Not Output 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
Read Normal Phase/ Phase Reversal	0xF2 0x67	0：Read Normal Phase	Read Normal Phase：08 C6 04 08 00 F2 67 00 FD CD Read Phase Reversal：08 C6 04 08 00 F2 67 01 FD CC Read Normal Phase/ Phase Reversal：08 C6 04 08 00 F2 67 02 FD CB	06 C7 04 00 F2 67 FD D6
Remove The UTF-8 BOM Encoding Format Of The QR Code	0xF6 0x3A	0：Disable	*Disable：08 C6 04 08 00 F6 3A 00 FD F6 Enable：08 C6 04 08 00 F6 3A 01 FD F5	06 C7 04 00 F6 3A FD FF
DataMatrix				
DataMatrix	F0h 24h	1：Enable	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 Normal Phase/ Phase Reversal	0xF2 0x6B	0：Read Normal Phase	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	0xF2 0x6C	0：Not Output 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	F0h 26h	0：Disable	Disable：08 C6 04 08 00 F0 26 00 FE 10 Enable：08 C6 04 08 00 F0 26 01 FE 0F	06 C7 04 00 F0 26 FE 19
Aztec				
Aztec	F0h 28h	0：Disable	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	0xF0 0x2F	0：Disable	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 Normal Phase/ Phase Reversal	0xF2 0x71	0：Read Normal Phase	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 Read Normal Phase/ Phase Reversal: 08 C6 04 08 00 F2 71 02 FD C1	06 C7 04 00 F2 71 FD CC
ISSN	0xF2 0x33	0：Disable	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
NEC-25(COOP 25)	0xF2 0x45	0：Disable	Enable：08 C6 04 08 00 F2 45 01 FD EE Disable：08 C6 04 08 00 F2 45 00 FD EF	06 C7 04 00 F2 45 FD F8
NEC-25(COOP 25) Check	0xF2 0x46	0：Disable	Enable：08 C6 04 08 00 F2 46 01 FD ED Disable：08 C6 04 08 00 F2 46 00 FD EE	06 C7 04 00 F2 46 FD F7
Transmit NEC-25(COOP 25) Check Character	0xF2 0x47	0：Disable	Enable：08 C6 04 08 00 F2 47 01 FD EC Disable：08 C6 04 08 00 F2 47 00 FD ED	06 C7 04 00 F2 47 FD F6
Set Lengths for NEC-25(COOP 25)	L1=0xF5 0x08, L2=0xF5 0x09			08 C7 04 00 F5 08 F5 09 FD 32
COMPOSITE	0xF2 0x17	0：Disable	Disable：08 C6 04 08 00 F2 17 00 FE 1D Enable：08 C6 04 08 00 F2 17 01 FE 1C	06 C7 04 00 F2 17 FE 26

For Any Technical Support, please contact us at: support@rtscan.net