Tipcode Industrial Series

TP60-HD Industrial 2D Scan Module

User Manual

Tipcode (Shenzhen) Technology Co., Ltd.

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Version History

Version	Description	Release Date
V1.0	Initial release.	2020-1-5

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Chapter 1 About the TP60-HD

The TP60-HD is a high-performance fixed-mount industrial barcode scanner designed for automated production lines. With an IP65 rating and a 1280 x 800 megapixel C-MOS sensor, it delivers excellent read performance and maintains reliable operation even in humid or dusty environments.

Key Features

- 1280 x 800 high-resolution, low-noise image sensor
- Outstanding 1D/2D barcode reading performance
- Compact, high-strength ABS housing
- IP65 protection rating
- Optocoupled external trigger input

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Specifications

Scan Performance	**Pixels**	1280 x 800
	Field of View	Horizontal 46 deg (H), Vertical 29 deg (V)
	Scan Modes	Button Trigger; Auto-Sensing; Continuous Scan; Pulse Mode
	Supported Symbologies	1D: UPC A, UPC E, EAN 8, EAN 13, Code 128, Code 39, Code 93, Code 32, Code 11, Codabar, Plessey, MSI, Interleaved 2 of 5, IATA 2 of 5, Matrix 2 of 5, Straight 2 of 5, Pharmacode, RSS-14, RSS-14 Expanded, RSS-14 Limited, Composite Code-A, Composite Code-B, Composite Code-C 2D: PDF 417, Micro PDF 417, Data Matrix, QR, Micro QR, Aztec, MaxiCode
	Read Precision	1D: >=4 mil; 2D: >=7 mil
	Working Distance	EAN (13 mil, 100%): 40 mm - 320 mm Code 39 (5 mil): 35 mm - 150 mm
	Print Contrast	>=30%

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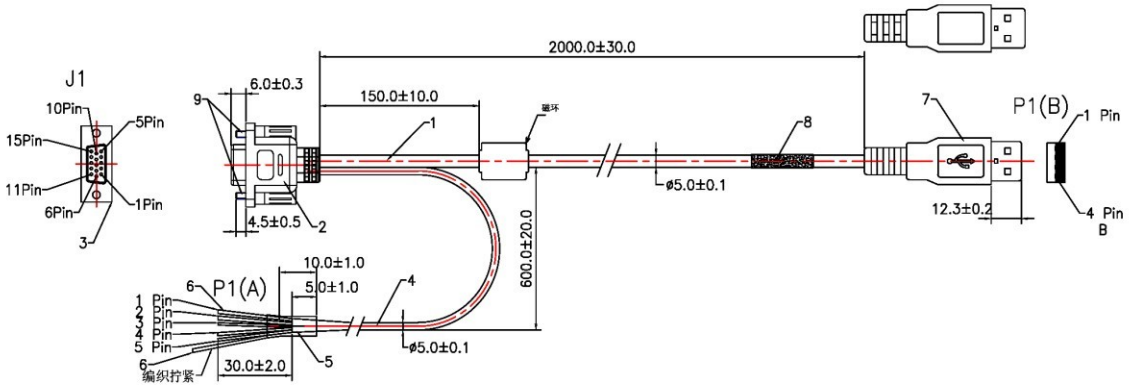
Electrical Parameters	**Dimensions (mm)**	40 (W) x 50.3 (D) x 23.1 (H)
	Weight	85 g (cable excluded)
	Notification	Buzzer; LED indicator
	Operating Voltage	5 VDC +/-10%
	Operating Current @ 5 VDC	300 mA +/-5% (typ.); 450 mA +/-5% (max.)
	Standby Current	100 mA +/-5%
	Rated Power	1500 mW +/-5% (typ.)
	Communication Interface	USB HID Keyboard / USB Virtual COM Port; RS-232 (9.6-115.2 Kbps)
	Optocoupled Trigger Input	Max. 15 mA (input 5-24 V; active-low trigger); 1 channel
Environmental Parameters	**IP Rating**	IP65
	Drop Height	1.5 m
	Storage Temperature	-40 C ~ +70 C
	Operating Temperature	-20 C ~ 60 C
	Relative Humidity	5%-95% (non-condensing)
	ESD Protection	+/-12 kV (air discharge), +/-8 kV (contact discharge)

* Test conditions: ambient temp. 23 C; ambient light 300 lux incandescent

* Depth-of-field data may vary with process and application. Subject to change without notice.

Cable and I/O Interfaces

USB Adapter Cable and I/O Connector



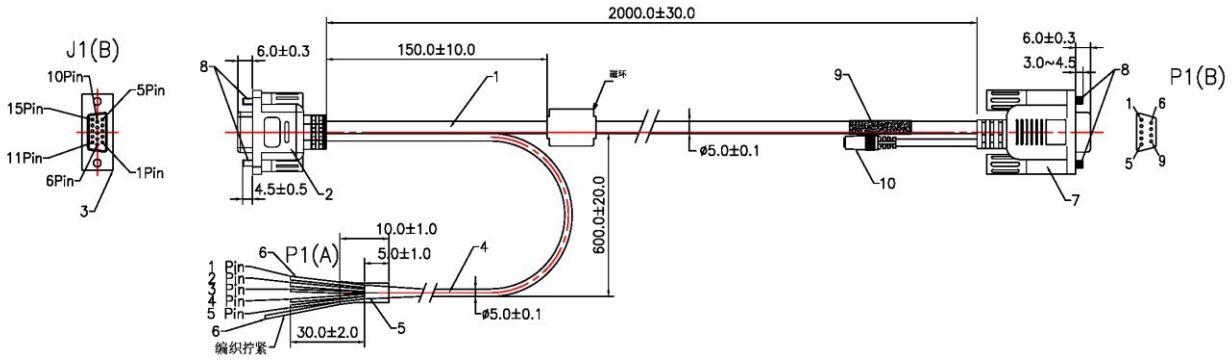
I/O Interface

P1(B) (USB Connector)	Definition	Wire Color
1	Trigger (External)	Brown
2	GND (Ground)	Black
6	Shield GND	

*Note: the external trigger input requires 5 V <= Vin <= 24 V, with a maximum current of 15 mA.

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RS232 Adapter Cable and I/O Connector



RS232 Serial Interface

J1 (DB-15 Pin)	Definition	Wire Color
7	TXD-TTL (Transmit Data)	White
13	RTS-TTL (Request to Send)	Blue
8	RXD-TTL (Receive Data)	Green
12	CTS-TTL (Clear to Send)	Orange
10	+5V	Red
6	GND (Ground)	Black
1	Shield GND	Cable Braid

I/O Interface

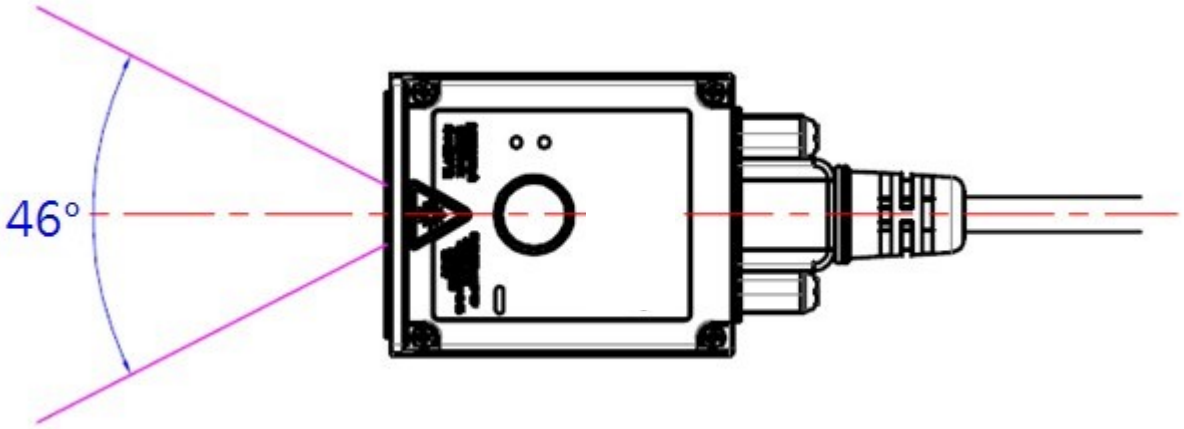
P1(B) (USB Connector)	Definition	Wire Color
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6	Shield GND	

*Note: the external trigger input requires 5 V <= Vin <= 24 V, with a maximum current of 15 mA.

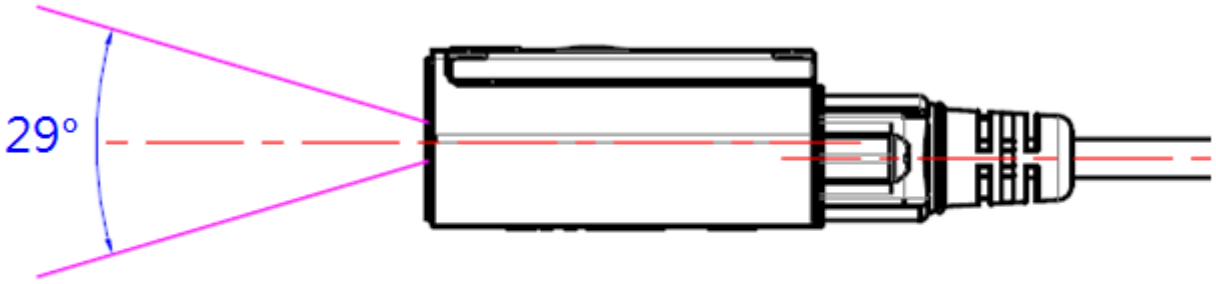
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Read Angles

Horizontal Read Angle

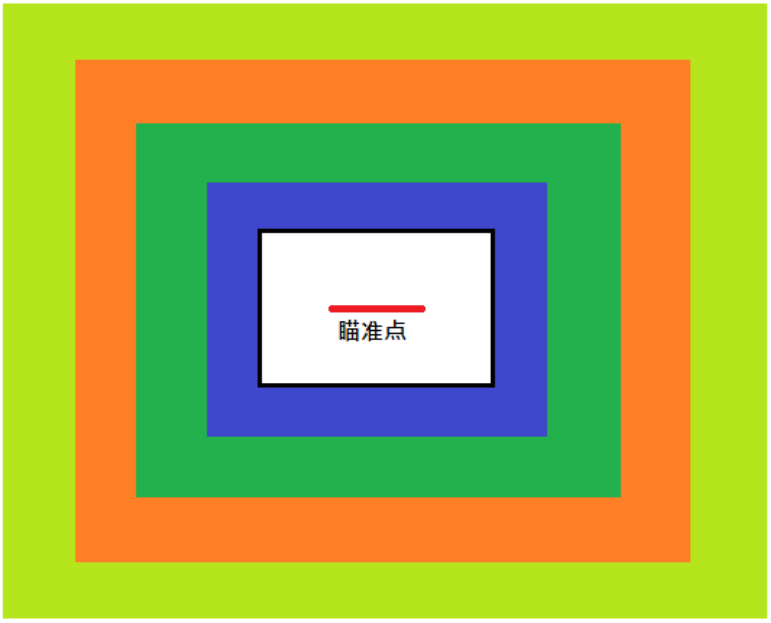


Vertical Read Angle



Scan Area

Window Distance		Scan Area
	10 cm	10 cm (W) X 6.5 cm (H)
	15 cm	15 cm (W) X 10 cm (H)
	20 cm	20 cm (W) X 13 cm (H)
	25 cm	25 cm (W) X 16 cm (H)
	30 cm	30 cm (W) X 19 cm (H)



Scan Area: External trigger position. Recommended distance from the scan area: 3 cm to 10 cm. The faster the object moves, the farther the trigger should be placed.



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Chapter 2 System Settings

Restore Defaults

Restores all scanner properties to factory defaults



Enter Setup



Restore Defaults



Exit Setup

Custom Settings

Save Custom Settings: stores frequently used configurations

Load Custom Settings: applies previously saved custom configurations

Enter Setup

Save Custom Settings

Load Custom Settings

Exit Setup

Long-Press Button Reset

Factory Reset: hold the button 15 s to restore all properties to factory defaults

Reboot: hold the button 15 s to restart the scanner (Reset)



Enter Setup



Disable Button Reset (Default)



Factory Reset



Reboot (Reset)



Exit Setup

Smart Tuning

Automatically tunes the optimal lighting and scan settings

Procedure:

1. Scan the "Smart Tuning Mode" barcode (no Enter Setup / Exit Setup required)

to enter setup mode (the illumination flashes repeatedly)

2. Press the scan button to read the barcode to be tuned

3. A continuous beep indicates success; two beeps indicate failure



Smart Tuning Mode

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Scan Mode

Button Trigger Mode:

Scanning starts while the button is held and stops on release or when the read time expires (default 3 s; configurable)

Auto-Sensing:

Scanning starts on image change and stops when the read time expires (default 3 s, configurable)

Continuous Scan:

Reads one or more barcodes continuously (same-code interval defines the read order); press and release the scan button to start or stop scanning

Pulse / External Trigger:

Scanning starts on a pulse signal (default high-to-low transition; trigger polarity is configurable) and stops when the read time expires (default 3 s, configurable)

Button Trigger Mode

Enter Setup

Button Trigger Mode (Default)

Exit Setup

Auto-Sensing Mode

Enter Setup

Auto-Sensing

Exit Setup

Auto-Sensing Mode

Enter Setup

Image and IR Trigger (Default)

IR Trigger

Image Trigger

Exit Setup

Auto-Sensing Sensitivity

Enter Setup

Low Sensitivity

Medium Sensitivity (Default)

High Sensitivity

Exit Setup

Continuous Scan Mode



Enter Setup



Continuous Scan



Exit Setup

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Pulse Trigger Mode

Enter Setup

Pulse Trigger (External)

Exit Setup

Pulse Trigger Polarity

Enter Setup

Trigger on High-to-Low Transition (Default)

Trigger on Low-to-High Transition

Exit Setup

Same-Code Reading Mode

Same-code reading behavior in Auto-Sensing, Continuous Scan and Pulse Trigger modes

By default, the same barcode is not re-read within 500 ms; adjustable 0-5000 ms, where 0 means no interval

- No Duplicate Reading

Repeated reads of the same barcode within the set interval are ignored to avoid duplicate output

Do not output the same barcode re-read within 100 ms

Scan "Enter Setup"

Scan the "Restrict Reading" setup barcode

Scan the "Read Time" setup barcode

Scan the "1" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan "Exit Setup"

- Interval Reading

Output the same barcode after the set interval.

Re-read the same barcode after a one-second interval

Scan "Enter Setup"

Scan the "Interval Reading" setup barcode

Scan the "Read Time" setup barcode

Scan the "1" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan "Exit Setup"

- Do Not Read One Identical Barcode

Do not repeat the previously read identical barcode

- Do Not Read Two Identical Barcodes

Do not repeat the last two identical barcodes

Same-Code Reading Mode

Enter Setup

No Duplicate Reading (Default)

Interval Reading

Do Not Read One Identical Barcode

Do Not Read Two Identical Barcodes

Exit Setup

Same-Code Read Interval

Enter Setup

Read Time (ms)

Exit Setup

Decode Time

Read time after triggering in Button, Pulse and Auto-Sensing modes; if no barcode is read before expiry, decoding stops and the unit enters standby. Default 3000 ms, adjustable 0-3600000 ms; 0 means continuous decoding until a read succeeds

Set the maximum read time to 5 seconds

Scan "Enter Setup"

Scan the "Decode Time" setup barcode

Scan the "5" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan the "0" barcode in Appendix 1 (Decimal Digits)

Scan "Exit Setup"



Enter Setup



Decode Time (ms)



Exit Setup

Reset Decode Time

In Button, Pulse and Auto-Sensing modes, a successful decode resets the timer and decoding continues; with a decode time of 0, decoding stops after a successful read



Enter Setup



Stop Scanning Immediately After Decode (Default)



Reset Decode Time and Continue Decoding Different Barcodes



Exit Setup

Decode Area

Full-Area Decoding: the entire image is used for decoding

Center-Area Decoding: the barcode center must fall within the defined area

Enter Setup

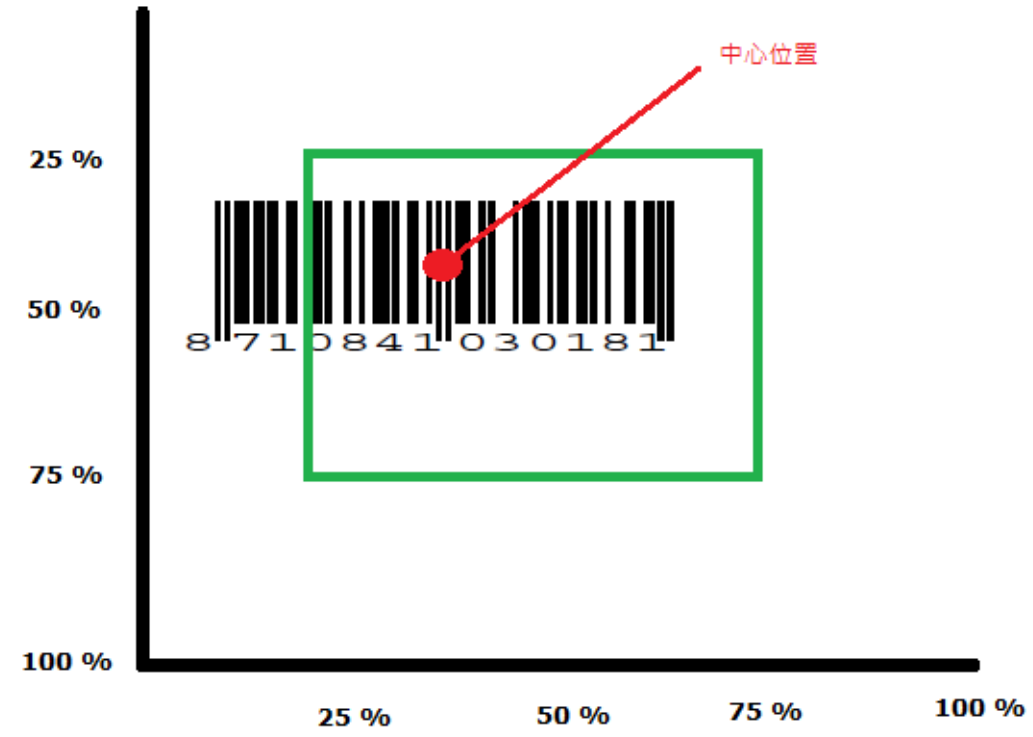
Full-Area Decoding (Default)

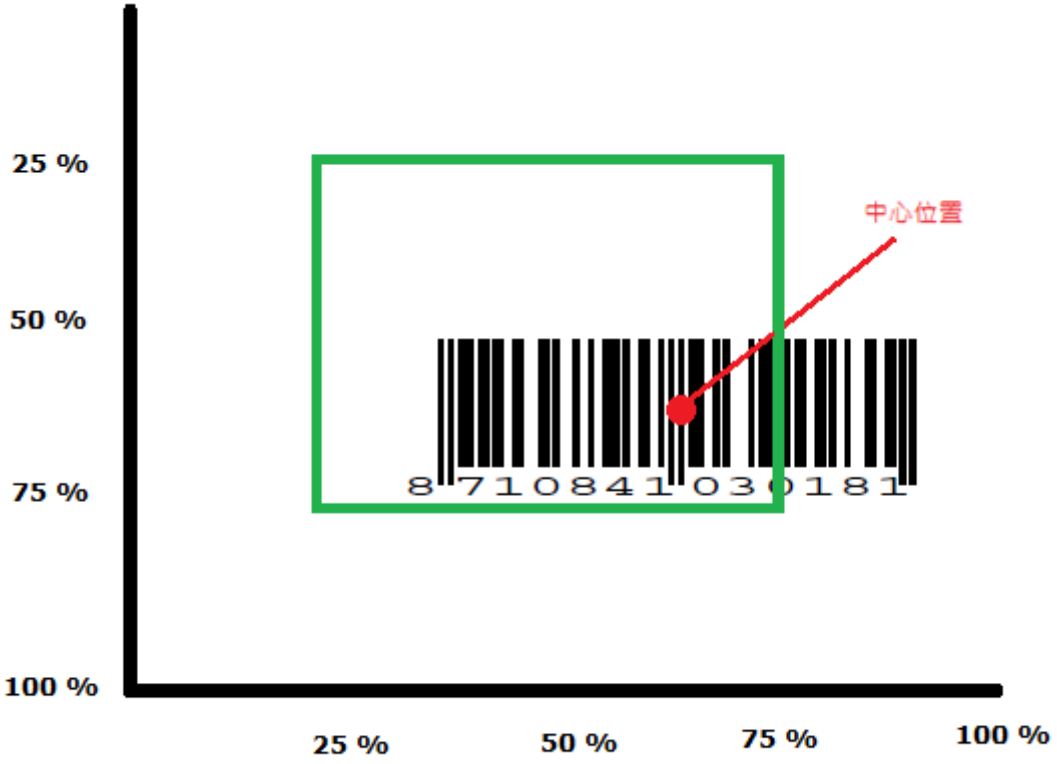
Center-Area Decoding

Exit Setup

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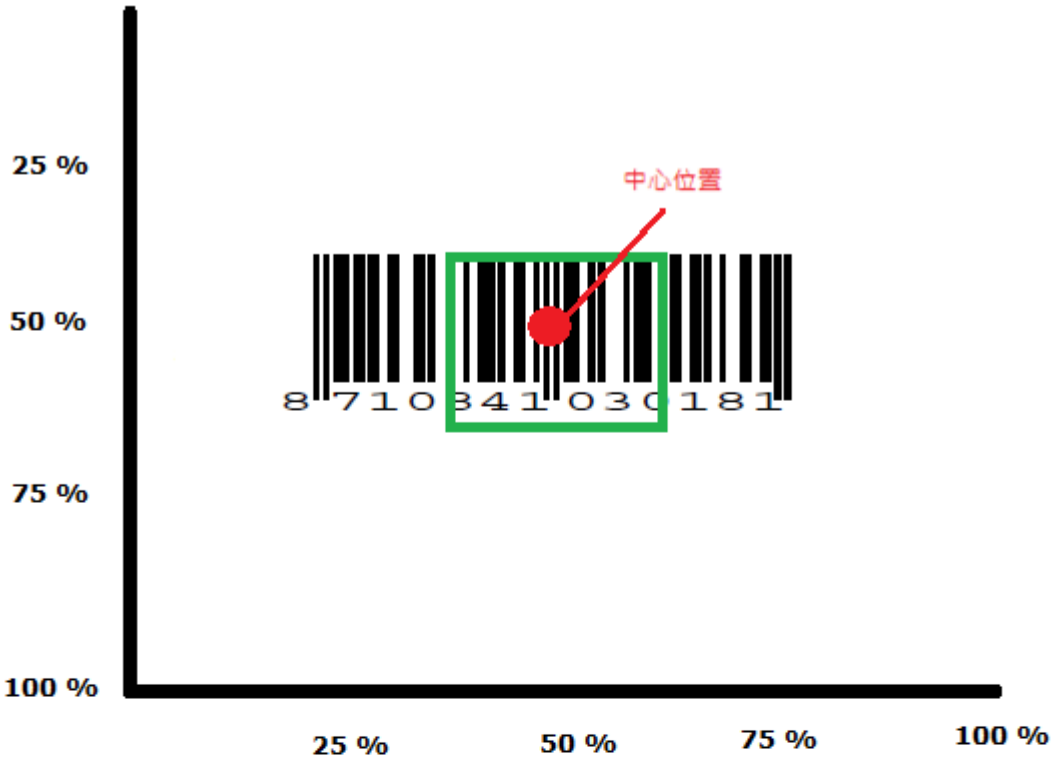
75% Center Area

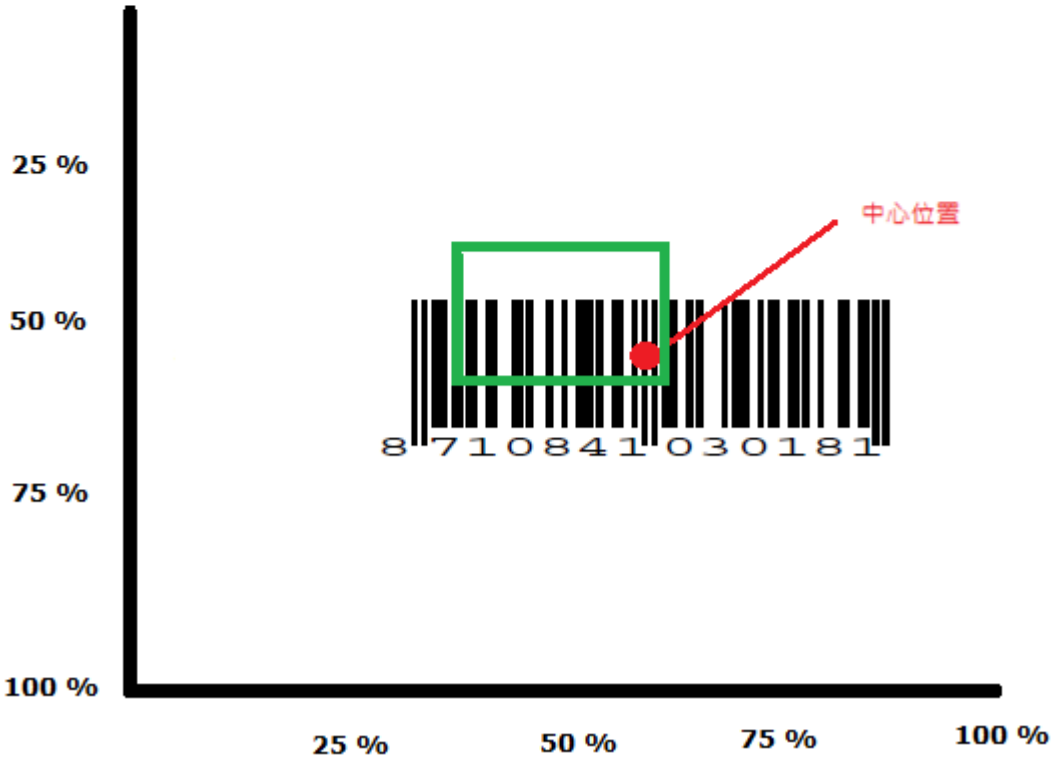




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25% Center Area





Center Area Range

Enter Setup

75% Center Area (Default)

50% Center Area

25% Center Area

Exit Setup

Decode Data Verification

Enter Setup

Off (Default)

Output After Two Reads

Output After Three Reads

Exit Setup

Read Failure Message

Enter Setup

- In serial mode, outputs a failure message when scanning ends with no barcode read

Disable Read Failure Message

Enable Read Failure Message

- Default failure message is "NG"; up to 8 ASCII characters can be set

Set the read failure message to "Bad"

1. Scan "Set Read Failure Message"

3. Scan the "B" barcode in the ASCII Code table

3. Scan the "a" barcode in the ASCII Code table

3. Scan the "d" barcode in the ASCII Code table

4. Scan "Exit Setup"

Set Read Failure Message

Exit Setup

Aiming Light

Enter Setup

Always On (Default)

On During Scan

Disable

Exit Setup

Illumination Mode



Enter Setup



On During Scan (Default)



Always On



Fade Up



Disable



Exit Setup

Illumination Intensity

Enter Setup

Low Brightness

Medium Brightness

High Brightness (Default)

Exit Setup

Power-On Beep



Enter Setup



Enable (Default)



Disable



Exit Setup

Decode Beep



Enter Setup



Enable (Default)



Disable



Exit Setup

Decode Beep Frequency

Enter Setup

Lowest - 800 Hz

Low - 1600 Hz

Medium - 2730 Hz (Default)

High - 4200 Hz

Exit Setup

Chapter 3 Output Modes

USB HID Keyboard



Enter Setup



USB HID Keyboard Output (Default)



Exit Setup

USB Virtual COM Port

Enter Setup

USB Virtual COM Port Output

Exit Setup

Serial Port



Enter Setup



Serial Output



Exit Setup

Serial Baud Rate

Enter Setup

9600 (Default)

19200

38400

57600

115200

230400

Exit Setup

Serial Data Bits

Enter Setup

7 Data Bits

**8 Data Bits

Exit Setup

Serial Parity

Enter Setup

**No Parity

Odd Parity

Even Parity

Exit Setup

Serial Stop Bits

Enter Setup

**1 Stop Bit

2 Stop Bits

Exit Setup

International Keyboard

Enter Setup

US (Default)

Belgium

United Kingdom

Denmark

Exit Setup

International Keyboard

Enter Setup

France

Germany

Italy

Norway

Exit Setup

International Keyboard

Enter Setup

Portugal

Spain

Sweden

Switzerland

Exit Setup

International Keyboard

Enter Setup

Japan

Hungary

Czech Republic

Slovakia

Exit Setup

International Keyboard



Enter Setup



Romania



Croatia



Poland



Turkey Q



Exit Setup

International Keyboard

Enter Setup

Brazil

Russia

Bulgaria

Exit Setup

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Code Page Character Encoding

Enter Setup

Simplified Chinese (GB2312) - Unicode / Excel; Notepad

Simplified Chinese (GB2312) - Code Page / Word

Exit Setup

Code Page Character Encoding

Enter Setup

Korean – Unicode / Excel ; Notepad

Korean– Code Page / Word

Exit Setup

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Code Page Character Encoding

Enter Setup

Thailand

Cyrillic

Turkish

Greek

Exit Setup

Code Page Character Encoding

Enter Setup

West European Latin

Central and East European Latin

Hebrew

Exit Setup

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Chapter 4 Symbology Settings

Supported Symbologies

UPC A	Enabled by Default
UPC E	Enabled by Default
EAN 8	Enabled by Default
EAN 13	Enabled by Default
Code 128 / GS1-128	Enabled by Default
Code 39	Enabled by Default
Code 93	Enabled by Default
Code 32	Disable
Code 11	Disable
Codabar	Enabled by Default
Plessey	Disable
MSI Plessey	Enabled by Default
Interleaved 2 of 5	Enabled by Default
IATA 2 of 5	Disable
Matrix 2 of 5	Disable

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Straight 2 of 5	Disable
Pharmacode	Disable
GS1 DataBar 14	Enabled by Default
GS1 DataBar 14 Stacked	Disable
GS1 DataBar Expanded	Enabled by Default
GS1 DataBar Expanded Stacked: Disabled	
GS1 DataBar Limited	Enabled by Default
Composite Code-A	Disable
Composite Code-B	Disable
Composite Code-C	Disable
PDF417	Enabled by Default
Micro PDF417	Enabled by Default
Data Matrix	Enabled by Default
QR	Enabled by Default
Micro QR	Enabled by Default
Aztec	Disable
MaxiCode	Disable

Enable All Symbologies

Enter Setup

Enable All Symbologies

Exit Setup

Enable 1D Only

Enter Setup

Enable 1D Only

Exit Setup

Enable 2D Only

Enter Setup

Enable 2D Only

Exit Setup

Disable All Symbologies



Enter Setup



Disable All Symbologies



Exit Setup

Disable 1D Symbologies

Enter Setup

Disable 1D Symbologies

Exit Setup

Disable 2D Symbologies

Enter Setup

Disable 2D Symbologies

Exit Setup

UPC A

Enter Setup

Enable UPC A (Default)

Disable UPC A

Exit Setup

Transmit First Digit

Enter Setup

Transmit First Digit (Default)

Do Not Transmit First Digit

Exit Setup

Check Digit

Enter Setup

Enable Check Digit (Default)

Disable Check Digit

Exit Setup

Convert to EAN 13

Enter Setup

Enable EAN 13 Conversion

Disable EAN 13 Conversion (Default)

Exit Setup

Enable/Disable 2/5-Digit Add-On Codes

Enter Setup

Enable UPC A 2/5-Digit Add-On

Disable UPC A 2/5-Digit Add-On (Default)

Exit Setup

Restrict 2/5-Digit Add-On Reading

Enter Setup

Read Only UPC A 2/5-Digit Add-On

Read UPC A and UPC A 2/5-Digit Add-On (Default)

Exit Setup

UPC E

Enter Setup

Enable UPC E (Default)

Disable UPC A

Exit Setup

Transmit First Digit

Enter Setup

Transmit First Digit (Default)

Do Not Transmit First Digit

Exit Setup

Check Digit

Enter Setup

Enable Check Digit (Default)

Disable Check Digit

Exit Setup

Convert to UPC A

Enter Setup

Enable UPC A Conversion

Disable UPC A Conversion (Default)

Exit Setup

Enable/Disable 2/5-Digit Add-On Codes

Enter Setup

Enable UPC E 2/5-Digit Add-On

Disable UPC E 2/5-Digit Add-On (Default)

Exit Setup

Restrict 2/5-Digit Add-On Reading

Enter Setup

Read Only UPC E 2/5-Digit Add-On

Read UPC E and UPC E 2/5-Digit Add-On (Default)

Exit Setup

EAN 8

Enter Setup

Enable EAN 8 (Default)

Disable EAN 8

Exit Setup

Transmit Check Digit

Enter Setup

Transmit Check Digit (Default)

Do Not Transmit Check Digit

Exit Setup

Convert to EAN 13

Enter Setup

Enable EAN 13 Conversion

Disable EAN 13 Conversion (Default)

Exit Setup

Enable/Disable 2/5-Digit Add-On Codes

Enter Setup

Enable EAN 8 2/5-Digit Add-On

Disable EAN 8 2/5-Digit Add-On (Default)

Exit Setup

Restrict 2/5-Digit Add-On Reading

Enter Setup

Read Only EAN 8 2/5-Digit Add-On

Read EAN 8 and EAN 8 2/5-Digit Add-On (Default)

Exit Setup

EAN 13

Enter Setup

Enable EAN 13 (Default)

Disable EAN 13

Exit Setup

Transmit Check Digit

Enter Setup

Transmit Check Digit (Default)

Do Not Transmit Check Digit

Exit Setup

ISBN Conversion

Enter Setup

Enable ISBN Conversion

Disable ISBN Conversion (Default)

Exit Setup

ISSN Conversion

Enter Setup

Enable ISSN Conversion

Disable ISSN Conversion (Default)

Exit Setup

Enable/Disable 2/5-Digit Add-On Codes

Enter Setup

Enable EAN 13 2/5-Digit Add-On

Disable EAN 13 2/5-Digit Add-On (Default)

Exit Setup

Restrict 2/5-Digit Add-On Reading

Enter Setup

Read Only EAN 13 2/5-Digit Add-On

Read EAN 13 and EAN 13 2/5-Digit Add-On (Default)

Exit Setup

Code 128 / GS1 -128

Enter Setup

Enable Code 128 / GS1-128 (Default)

Disable Code 128 / GS1-128

Exit Setup

Code 128 Decode Length Setting

Configuration Example:

Limit Code 128 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Code 128 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Code 128 Any Length" setup barcode

Scan "Exit Setup"

Code 128 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Code 39

Enter Setup

Enable Code 39 (Default)

Disable Code 39

Exit Setup

Full ASCII

Enter Setup



Enable Code 39 Full ASCII



Disable Code 39 Full ASCII (Default)



Exit Setup

Start/Stop Characters

Enter Setup

Transmit Start/Stop Characters

Do Not Transmit Start/Stop Characters (Default)

Exit Setup

Checksum

Enter Setup

No Verification (Default)

Verify and Transmit

Verify but Do Not Transmit

Exit Setup

Code 39 Decode Length Setting

Configuration Example:

Limit Code 39 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Code 39 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Code 39 Any Length" setup barcode

Scan "Exit Setup"

Code 39 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Code 32

Enter Setup

Enable Code 32

Disable Code 32 (Default)

Exit Setup

Start/Stop Characters

Enter Setup

Transmit Start/Stop Characters

Do Not Transmit Start/Stop Characters (Default)

Exit Setup

Code 93

Enter Setup

Enable Code 93

Disable Code 93 (Default)

Exit Setup

Code 93 Decode Length Setting

Configuration Example:

Limit Code 93 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Code 93 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Code 93 Any Length" setup barcode

Scan "Exit Setup"

Code 93 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Code 11

Enter Setup

Enable Code 11

Disable Code 11 (Default)

Exit Setup

Transmit Check Digit

Enter Setup

Transmit Check Digit (Default)

Do Not Transmit Check Digit

Exit Setup

Code 11 Decode Length Setting

Configuration Example:

Limit Code 11 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Code 11 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Code 11 Any Length" setup barcode

Scan "Exit Setup"

Code 11 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Codabar

Enter Setup

Enable Codabar (Default)

Disable Codabar

Exit Setup

Checksum

Enter Setup

No Verification (Default)

Verify and Transmit

Verify but Do Not Transmit

Exit Setup

Start/Stop Characters

Enter Setup

Transmit Start/Stop Characters

Do Not Transmit Start/Stop Characters (Default)

Exit Setup

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Codabar Decode Length Setting

Configuration Example:

Limit Codabar read length to 5-18 characters

Scan "Enter Setup"

Scan the "Codabar Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Codabar Any Length" setup barcode

Scan "Exit Setup"

Codabar Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Plessey

Enter Setup

Enable Plessey

Disable Plessey (Default)

Exit Setup

Plessey Decode Length Setting

Configuration Example:

Limit Plessey read length to 5-18 characters

Scan "Enter Setup"

Scan the "Plessey Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Plessey Any Length" setup barcode

Scan "Exit Setup"

Plessey Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

MSI Plessey

Enter Setup

Enable MSI Plessey (Default)

Disable MSI Plessey

Exit Setup

Checksum

Enter Setup

No Verification

Mod 10 Check (Default)

Exit Setup

Checksum

Enter Setup

Mod 10/10 Check

Mod 11/10 Check

Exit Setup

Transmit Check Digit

Enter Setup

Transmit Check Digit (Default)

Do Not Transmit Check Digit

Exit Setup

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MSI Plessey Decode Length Setting

Configuration Example:

Limit MSI Plessey read length to 5-18 characters

Scan "Enter Setup"

Scan the "MSI Plessey Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "MSI Plessey Any Length" setup barcode

Scan "Exit Setup"

MSI Plessey Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Interleaved 2 of 5

Enter Setup

Enable Interleaved 2 of 5 (Default)

Disable Interleaved 2 of 5

Exit Setup

Checksum

Enter Setup

No Verification (Default)

Verify and Transmit

Exit Setup

Interleaved 2 of 5 Decode Length Setting

Configuration Example:

Limit Interleaved 2 of 5 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Interleaved 2 of 5 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Interleaved 2 of 5 Any Length" setup barcode

Scan "Exit Setup"

Interleaved 2 of 5 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

Matrix 2 of 5

Enter Setup

Enable Matrix 2 of 5

Disable Matrix 2 of 5 (Default)

Exit Setup

Matrix 2 of 5 Decode Length Setting

Configuration Example:

Limit Matrix 2 of 5 read length to 5-18 characters

Scan "Enter Setup"

Scan the "Matrix 2 of 5 Length Range" setup barcode

Scan the "0" barcode in the ASCII Code table

Scan the "5" barcode in the ASCII Code table

Scan the "1" barcode in the ASCII Code table

Scan the "8" barcode in the ASCII Code table

Scan "Exit Setup"

No Length Limit

Scan "Enter Setup"

Scan the "Matrix 2 of 5 Any Length" setup barcode

Scan "Exit Setup"

Matrix 2 of 5 Decode Length Setting

Enter Setup

Limit to One Length

Limit to Two Different Lengths

Limit Length Range

No Length Limit (Default)

Exit Setup

IATA 2 of 5

Enter Setup

Enable IATA 2 of 5

Disable IATA 2 of 5 (Default)

Exit Setup

Straight 2 of 5

Enter Setup

Enable Straight 2 of 5

Disable Straight 2 of 5 (Default)

Exit Setup

Pharmacode

Enter Setup

Enable Pharmacode

Disable Pharmacode (Default)

Exit Setup

GS1 DataBar 14

Enter Setup

Enable GS1 DataBar 14 (Default)

Disable GS1 DataBar 14

Exit Setup

GS1 DataBar 14 Stacked

Enter Setup

Enable GS1 DataBar 14 Stacked

Disable GS1 DataBar 14 Stacked (Default)

Exit Setup

AI (01) Character Transmission

Enter Setup

Output AI (01) Character (Default)

Do Not Output AI (01) Character

Exit Setup

GS1 DataBar Expanded

Enter Setup

Enable GS1 DataBar Expanded (Default)

Disable GS1 DataBar Expanded

Exit Setup

GS1 DataBar Expanded Stacked

Enter Setup

Enable GS1 DataBar Expanded Stacked

Disable GS1 DataBar Expanded Stacked (Default)

Exit Setup

AI (01) Character Transmission

Enter Setup

Output AI (01) Character (Default)

Do Not Output AI (01) Character

Exit Setup

GS1 DataBar Limited

Enter Setup

Enable GS1 DataBar Limited (Default)

Disable GS1 DataBar Limited

Exit Setup

AI (01) Character Transmission

Enter Setup

Output AI (01) Character (Default)

Do Not Output AI (01) Character

Exit Setup

Composite Code-A

Enter Setup

Enable Composite Code-A

Disable Composite Code-A (Default)

Exit Setup

Composite Code-B

Enter Setup

Enable Composite Code-B

Disable Composite Code-B (Default)

Exit Setup

Composite Code-C

Enter Setup

Enable Composite Code-C

Disable Composite Code-C (Default)

Exit Setup

PDF417

Enter Setup

Enable PDF417 (Default)

Disable PDF417

Exit Setup

Micro PDF417

Enter Setup

Enable Micro PDF417 (Default)

Disable Micro PDF417

Exit Setup

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Data Matrix

Enter Setup

Enable Data Matrix (Default)

Disable Data Matrix

Exit Setup

Rectangular Data Matrix

Enter Setup

Enable Rectangular Data Matrix (Default)

Disable Rectangular Data Matrix

Exit Setup

Mirror Decoding

Enter Setup

Enable Mirror Decoding (Default)

Disable Mirror Decoding

Exit Setup

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QR

Enter Setup

Enable QR (Default)

Disable QR

Exit Setup

Mirror Decoding

Enter Setup

Enable Mirror Decoding (Default)

Disable Mirror Decoding

Exit Setup

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Micro QR

Enter Setup

Enable Micro QR (Default)

Disable Micro QR

Exit Setup

Aztec

Enter Setup

Enable Aztec

Disable Aztec (Default)

Exit Setup

Mirror Decoding

Enter Setup

Enable Mirror Decoding (Default)

Disable Mirror Decoding

Exit Setup

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MaxiCode



Enter Setup

Enable MaxiCode

Disable MaxiCode (Default)



Exit Setup

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Chapter 5 Data Editing

Output Format

The data output format is as follows

Barcode Message (4 bytes)	Prefix (4 bytes)	AIM ID	Barcode Data	Suffix (4 bytes)	Terminator Character (1 byte)

Barcode Message

1. Barcode message output is disabled by default
2. Barcode message output can be enabled or disabled via serial commands or setup barcodes
3. Serial mode only; USB HID keyboard is not supported

The format is defined below:

Start Flag 0x03 (1 byte)	Symbology Code (1 byte) Hexadecimal	Barcode Length (2 bytes) 0x0001 ~0xFFFF

Symbology codes are listed below:

Code	2D Barcodes	Code	1D Barcodes	Code	1D Barcodes
0x 41	PDF417	0x61	UPC A	0x71	Pharmacode
0x 42	Micro PDF417	0x 62	UPC E	0x72	GS1 DataBar 14
0x 43	Data Matrix	0x63	EAN 8	0x73	GS1 DataBar Expanded
0x 44	QR	0x64	EAN 13	0x74	GS1 DataBar Limited
0x 45	Micro QR	0x65	Code 128	0x75	Composite Code-A
0x 46	Aztec	0x66	Code 39	0x76	Composite Code-B
0x 47	MaxiCode	0x67	Code 93	0x77	Composite Code-C
		0x68	Code 32		
		0x69	Code 11		
		0x6A	Codabar		
		0x6B	Plessey		
		0x6C	MSI Plessey		
		0x6D	Interleaved 2 of 5		
		0x6E	IATA 2 of 5		
		0x6F	Matrix 2 of 5		
		0x70	Straight 2 of 5		

Barcode Message

Enter Setup

Off (Default)

Open

Exit Setup

Barcode ID

Enter Setup

Disable Barcode ID (Default)

Enable AIM ID

Exit Setup

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Barcode ID Table

Symbology	AIM
UPC-A	E
UPC-E	E
EAN-8	E
EAN-13	E
Code 128	C
Code 39	A
Code 93	G
Code 32	A
Code 11	H
Codabar	F
Plessey	P
MSI / Plessey	M
Interleaved 2 of 5	I
IATA 2 of 5	R
Matrix 2 of 5	X
Straight 2 of 5	S
Pharmacode	X
GS1 DataBar 14	e
GS1 DataBar Expanded	e
GS1 DataBar Limited	e
Composite CC-A	e
Composite CC-B	e
Composite CC-C	e
PDF417	L
Micro PDF417	L
Data Matrix	d
QR	Q
Micro QR	Q
Aztec	Z
MaxiCode	U

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Prefix

Adds output characters before barcode data; up to 4 characters

Add the character "a" before all barcode data:

1. Scan "Enter Setup"
2. Scan "Set All-Code Prefix"
3. Scan the "a" barcode in Appendix 3 (ASCII Code Table)
4. Scan "Exit Setup"

Remove the barcode prefix:

1. Scan "Enter Setup"
2. Scan "Disable All-Code Prefix"
3. Scan "Exit Setup"

Add "&1" before EAN 13 barcode data:

1. Scan "Enter Setup"
2. Scan "Set Barcode Prefix"
3. Scan the "EAN 13" barcode in Appendix 2
4. Scan the "&" barcode in Appendix 3 (ASCII Code Table)
5. Scan the "1" barcode in Appendix 3 (ASCII Code Table)
7. Scan "Exit Setup"

Remove the EAN 13 prefix:

1. Scan "Enter Setup"
2. Scan "Set Barcode Prefix"
3. Scan the "EAN 13" barcode in Appendix 2
3. Scan "Exit Setup"

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Enter Setup

Disable All-Code Prefix (Default)

Set All-Code Prefix

Set Barcode Prefix

Disable Barcode Prefix

Exit Setup

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Suffix

Adds output characters after barcode data; up to 4 characters

Add the character "S" after all barcode data:

1. Scan "Enter Setup"
2. Scan "Set All-Code Suffix"
3. Scan the "S" barcode in Appendix 3 (ASCII Code Table)
4. Scan "Exit Setup"

Remove the barcode suffix:

1. Scan "Enter Setup"
2. Scan "Disable All-Code Suffix"
3. Scan "Exit Setup"

Add "+2" after Code 128 barcode data:

1. Scan "Enter Setup"
2. Scan "Set Barcode Suffix"
3. Scan the "Code 128" barcode in Appendix 2
4. Scan the "+" barcode in Appendix 3 (ASCII Code Table)
5. Scan the "2" barcode in Appendix 3 (ASCII Code Table)
7. Scan "Exit Setup"

Remove the Code 128 suffix:

1. Scan "Enter Setup"
2. Scan "Set Barcode Suffix"
3. Scan the "Code 128" barcode in Appendix 2
3. Scan "Exit Setup"

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Enter Setup

Disable All-Code Suffix (Default)

Set All-Code Suffix

Set Barcode Suffix

Disable Barcode Suffix

Exit Setup

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Remove Leading Characters

Removes up to 20 leading characters from barcode data

Remove the first 3 characters from all barcodes:

1. Scan "Enter Setup"
2. Scan "Remove Leading Characters from All Codes"
3. Scan the "3" barcode in Appendix 1 (Decimal Digits)
4. Scan "Exit Setup"

Do not remove leading characters from all barcodes:

1. Scan "Enter Setup"
2. Scan "Remove Leading Characters from All Codes"
3. Scan the "0" barcode in Appendix 1 (Decimal Digits)
4. Scan "Exit Setup"

Remove the first 2 characters from QR barcode data:

1. Scan "Enter Setup"
2. Scan "Remove Leading Characters from Barcode"
3. Scan the "QR" barcode in Appendix 2
4. Scan the "2" barcode in Appendix 1 (Decimal Digits)
5. Scan "Exit Setup"

Remove leading characters from QR barcode:

1. Scan "Enter Setup"
2. Scan "Remove Leading Characters from Barcode"
3. Scan the "QR" barcode in Appendix 2
4. Scan the "0" barcode in Appendix 1 (Decimal Digits)
5. Scan "Exit Setup"

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Enter Setup

Remove Leading Characters from All Codes

Remove Leading Characters from Barcode

Exit Setup

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Remove Trailing Characters

Removes up to 20 trailing characters from barcode data

Remove the last 5 characters from all barcodes:

1. Scan "Enter Setup"
2. Scan "Remove Trailing Characters from All Codes"
3. Scan the "5" barcode in Appendix 1 (Decimal Digits)
4. Scan "Exit Setup"

Do not remove trailing characters from all barcodes:

1. Scan "Enter Setup"
2. Scan "Remove Trailing Characters from All Codes"
3. Scan the "0" barcode in Appendix 1 (Decimal Digits)
4. Scan "Exit Setup"

Remove the last 2 characters from Code 39 barcode data:

1. Scan "Enter Setup"
2. Scan "Remove Trailing Characters from Barcode"
3. Scan the "Code 39" barcode in Appendix 2
4. Scan the "2" barcode in Appendix 1 (Decimal Digits)
5. Scan "Exit Setup"

Remove trailing characters from Code 39 barcode:

1. Scan "Enter Setup"
2. Scan "Remove Trailing Characters from Barcode"
3. Scan the "Code 39" barcode in Appendix 2
4. Scan the "0" barcode in Appendix 1 (Decimal Digits)
5. Scan "Exit Setup"

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Enter Setup

Remove Trailing Characters from All Codes

Remove Trailing Characters from Barcode

Exit Setup

Terminator Character



Enter Setup



None



Enter / CR (Default)



Exit Setup

Terminator Character

Enter Setup



CR / LF



TAB

Exit Setup

Caps Lock



Enter Setup



Disable Caps Lock (Default)



Enable Caps Lock



Exit Setup

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GS Character Conversion

Converts the GS character to another ASCII code in keyboard mode

Set GS character conversion to output "#":

1. Scan "Enter Setup"
2. Scan "Convert GS Character"
3. Scan the "#" barcode in the ASCII Code table
4. Scan "Exit Setup"

Set GS character conversion to output Enter:

1. Scan "Enter Setup"
2. Scan "Convert GS Character"
3. Scan the "Enter" barcode in the ASCII Code table
4. Scan "Exit Setup"

Restore GS Character Default

1. Scan "Enter Setup"
2. Scan "Disable GS Character Conversion"
3. Scan "Exit Setup"

GS Character Conversion



Enter Setup



Disable GS Character Conversion (Default)



Convert GS Character



Exit Setup

Function Key Mapping

Enter Setup

Disable

Enable (Default)

Exit Setup

Function Key Mapping

Enter Setup

Ctrl Char Mode (Default)

Alt + Unicode Mode

Exit Setup

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Chapter 6 Serial Commands

Transmit/Receive Format and Response Messages

Command Format:

Data Length (1 byte)	Transmitter (1 byte)	Identifier (1 byte)	Command (1 byte)	Data (max. 32 bytes)	Check Digit	
					High Byte (1 byte)	Low Byte (1 byte)

Data Length: length excluding Checksum (min. 5 bytes; max. 36 bytes)

Transmitter: **57 (hex) = host to decoder, or 52 (hex) = decoder to host**

Identifier: Command identifier

Command: Configuration command

Data: Configuration content

Checksum = 0x10000 - [Data Length] - [Transmitter] - [Identifier] - [Command] - [D1 + D2 + D3 + ...]

Response Message:

After the host sends a command, the device returns a message indicating success or failure

On success, the following 5 hex bytes (ACK) are sent to the host

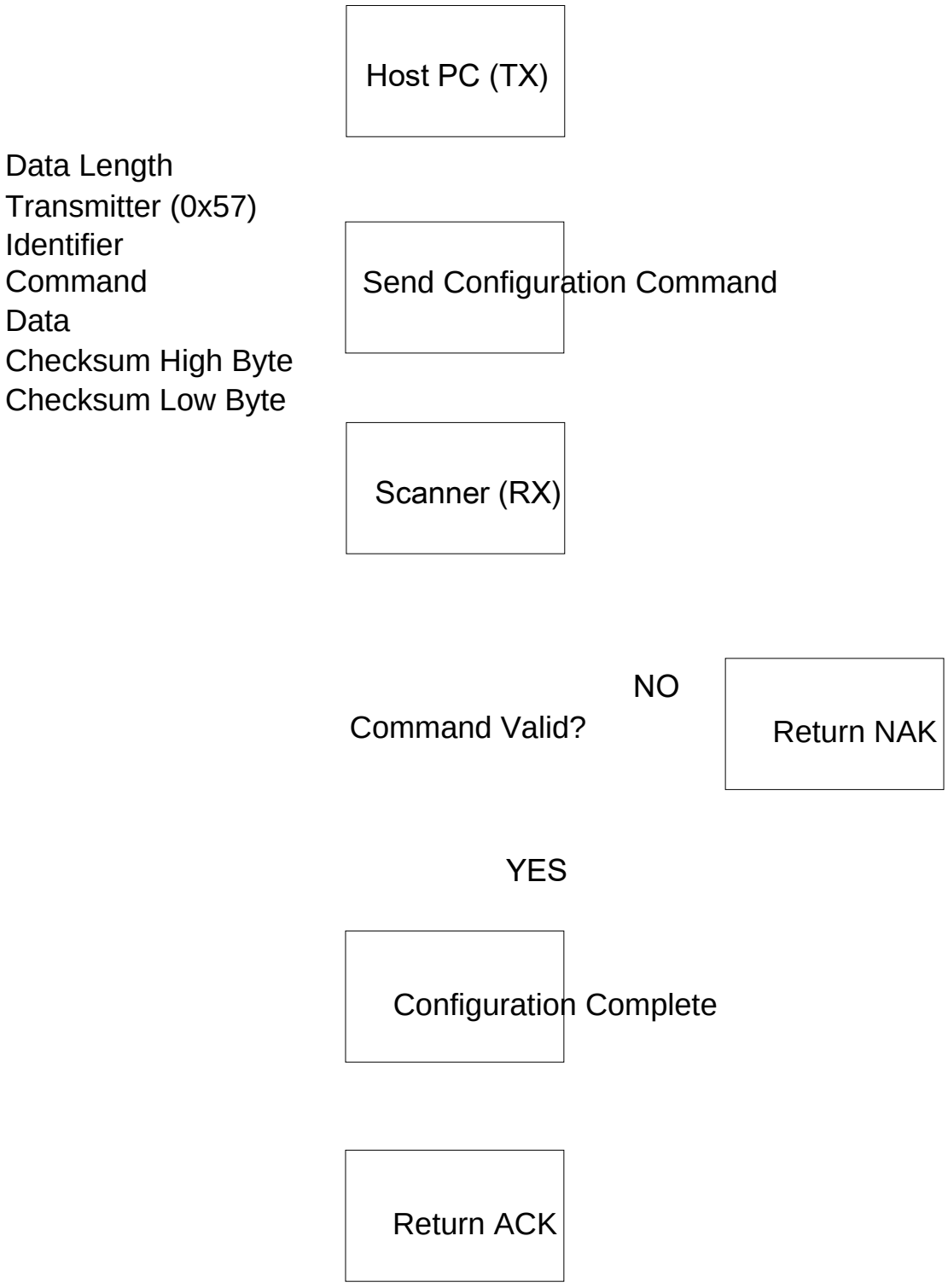
52	A0	EC	FE	74

On failure, the following 5 hex bytes (NAK) are sent to the host

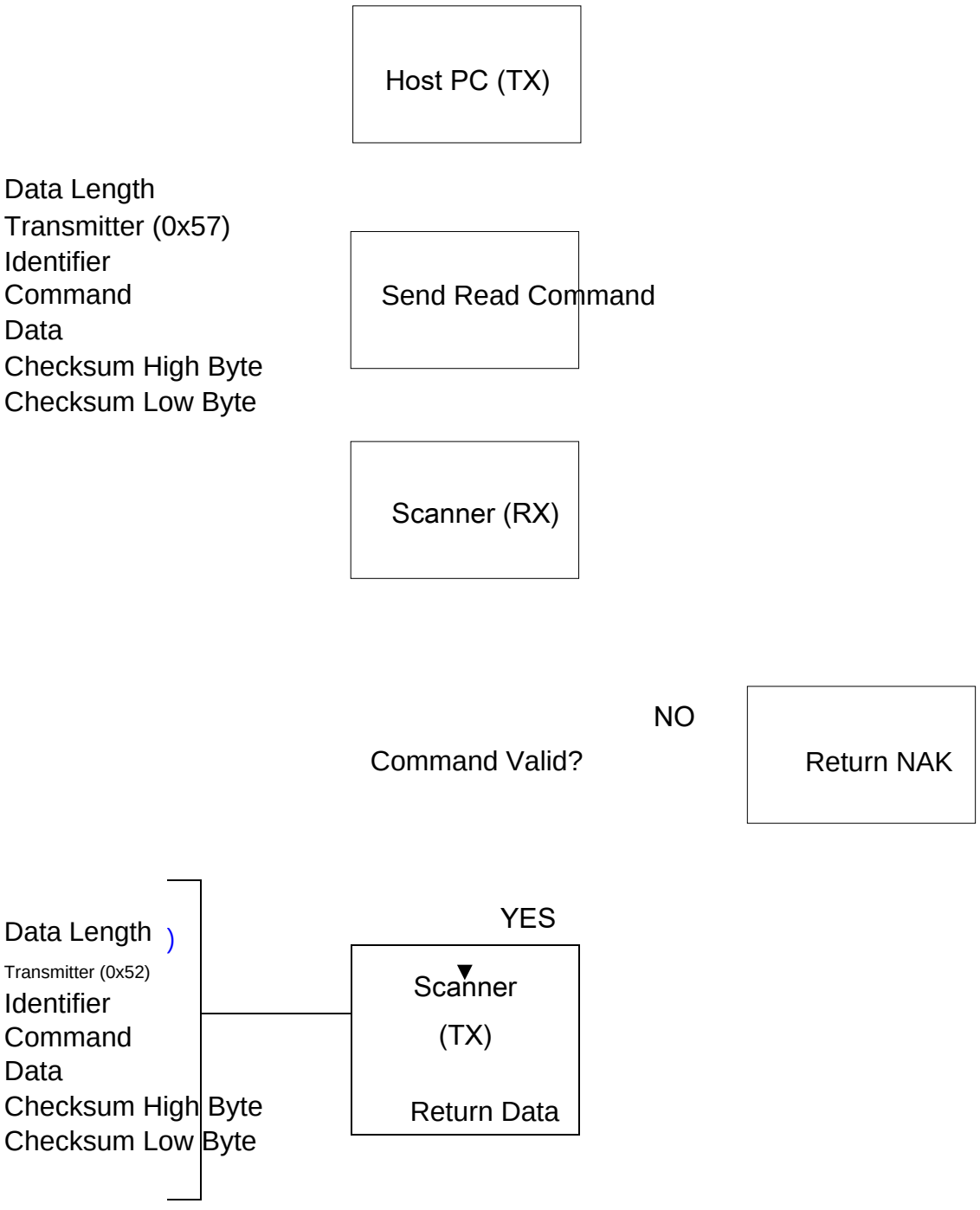
52	A0	E0	FE	80

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Configuration Flow



Read Flow


Host PC (TX)
Data Length
Transmitter (0x57)
Identifier
Command
Data
Checksum High Byte
Checksum Low Byte
Send Read Command
Scanner (RX)
NO
Command Valid?
Return NAK
YES
Data Length
Transmitter (0x52)
Identifier
Command
Data
Checksum High Byte
Checksum Low Byte
Scanner
(TX)
Return Data

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Command Configuration Example

Start Scan

Data Length	Transmitter	Identifier	Command	Data	Checksum High Byte	Checksum Low Byte
05	57	A0	01	01	FF	02

Checksum = 0x10000 - 0x05 - 0x057 - 0xa0 - 0x01 - 0x01 = 0xFF02 (hex)

Stop Scan

Data Length	Transmitter	Identifier	Command	Data	Checksum High Byte	Checksum Low Byte
05	57	A0	01	00	FF	03

Checksum = 0x10000 - 0x05 - 0x057 - 0xa0 - 0x01 - 0x00 = 0xFF03 (hex)

Enable ACK Response for Scan Command

Data Length	Transmitter	Identifier	Command	Data	Checksum High Byte	Checksum Low Byte
05	57	A0	00	01	FF	03

Checksum = 0x10000 - 0x05 - 0x057 - 0xa0 - 0x00 - 0x01 = 0xFF03 (hex)

Disable ACK Response for Scan Command

Data Length	Transmitter	Identifier	Command	Data	Checksum High Byte	Checksum Low Byte
05	57	A0	00	00	FF	04

Checksum = 0x10000 - 0x05 - 0x057 - 0xa0 - 0x00 - 0x00 = 0xFF03 (hex)

Set decode time to 1 s (1000 ms) (data length: 2 bytes)

Data Length	Transmitter	Identifier	Command	Data	Checksum High Byte	Checksum Low Byte
06	57	A1	16	03E8 (1000 ms)	FE	01

Checksum = 0x10000 - 0x06 - 0x057 - 0xa1 - 0x15 - 0x03 - 0xE8 = 0xFE01 (hex)

Set Scan Trigger String

Enter Setup

Disable

1-8 ASCII characters can be set

Set the scan trigger string to "TRG"

1. Scan "Set Scan Trigger String"

3. Scan the "T" barcode in the ASCII Code table

3. Scan the "R" barcode in the ASCII Code table

3. Scan the "G" barcode in the ASCII Code table

4. Scan "Exit Setup"

Set Scan Trigger String

Exit Setup

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Command Set

Function		Identifier	Command	Data
Check Communication Status		0E	0D	01
Read Version		0E	0D	02
Read Scan Mode		0E	0D	03
Read Scan Status		0E	0D	04
Read Decode Result		0E	0D	05
Scan ACK Response	Open	A0	00	01
	Disable	A0	00	00
Scan Control	Start Scan	A0	01	01
	Stop Scan	A0	01	00
Save Settings		A0	08	01
Restore Defaults		A1	01	0F
Save Custom Settings		A1	01	08
Load Custom Settings		A1	01	CF
Scan Mode	Button Scan	A1	02	01
	Auto Scan	A1	02	02
	Continuous Scan	A1	02	03
	Pulse Mode	A1	02	04
Auto-Sensing Mode	IR Trigger	A1	02	11
	Image Trigger	A1	02	12
	Image and IR Trigger	A1	02	13

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Function		Identifier	Command	Data
Aiming Light	Disable	A1	03	00
	On During Scan	A1	03	01
	Always On	A1	03	02
Illumination Mode	Disable	A1	04	00
	On During Scan	A1	04	01
	Always On	A1	04	02
Illumination Intensity	Low Brightness	A1	04	11
	Medium Brightness	A1	04	12
	High Brightness	A1	04	13
Decode Beep	Enable	A1	05	0E
	Disable	A1	05	0D
Decode Time (data length: 2 bytes) 0 means continuous decoding until a read succeeds		A1	16	00~FFFF
Same-Code Reading Mode	No Duplicate Reading	A1	08	01
	Interval Reading	A1	08	02
	Do Not Read One Identical Barcode	A1	08	03
	Do Not Read One Identical Barcode	A1	08	04
Same-Code Read Interval (data length: 2 bytes) 0 means no interval		A1	18	00~FFFF

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Function		Identifier	Command	Data
Auto-Sensing Sensitivity	Low Sensitivity	A1	0A	01
	Medium Sensitivity	A1	0A	02
	High Sensitivity	A1	0A	03
Decode Data Verification	Disable	A1	0B	01
	Read Twice	A1	0B	02
	Read Three Times	A1	0B	03
Decode Message	Enable	A2	01	0E
	Disable	A2	01	0D
Barcode ID	Disable	A2	02	00
	AIM ID	A2	02	01
Terminator Character	None	A2	03	01
	CR/LF	A2	03	02
	CR	A2	03	03
	TAB	A2	03	04

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Function		Identifier	Command	Data
Enable All Symbologies		B0	01	0E
Disable All Symbologies		B0	01	0D
Enable 1D Only		B0	01	01
Enable 2D Only		B0	01	02
Disable 1D Symbologies		B0	01	03
Disable 2D Symbologies		B0	01	04
UPC/EAN Add-On Codes	Enable	B0	02	0E
	Disable	B0	02	0D
UPC A	Enable	B1	01	0E
	Disable	B1	01	0D
	Transmit First Digit	B1	02	0E
	Do Not Transmit First Digit	B1	02	0D
	Enable Check Digit	B1	03	0E
	Disable Check Digit	B1	03	0D
	Enable EAN-13 Conversion	B1	04	0E
	Disable EAN-13 Conversion	B1	04	0D

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Function		Identifier	Command	Data
UPC E	Enable	B2	01	0E
	Disable	B2	01	0D
	Transmit First Digit	B2	02	0E
	Do Not Transmit First Digit	B2	02	0D
	Enable Check Digit	B2	03	0E
	Disable Check Digit	B2	03	0D
	Enable UPC A Conversion	B2	04	0E
	Disable UPC A Conversion	B2	04	0D
EAN 8	Enable	B3	01	0E
	Disable	B3	01	0D
	Transmit Check Digit	B3	02	0E
	Do Not Transmit Check Digit	B3	02	0D
	Enable EAN-13 Conversion	B3	03	0E
	Disable EAN-13 Conversion	B3	03	0D

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Function		Identifier	Command	Data
EAN 13	Enable	B4	01	0E
	Disable	B4	01	0D
	Transmit Check Digit	B4	02	0E
	Do Not Transmit Check Digit	B4	02	0D
	Enable ISBN Conversion	B4	03	0E
	Disable ISBN Conversion	B4	03	0D
	Enable ISSN Conversion	B4	04	0E
	Disable ISSN Conversion	B4	04	0D
Code 128	Enable	B5	01	0E
	Disable	B5	01	0D
Code 39	Enable	B6	01	0E
	Disable	B6	01	0D
	Enable ASCII	B6	02	0E
	Disable ASCII	B6	02	0D
	Transmit Start/Stop Characters	B6	03	0E
	Do Not Transmit Start/Stop Characters	B6	03	0D

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Function		Identifier	Command	Data
Code 39	No Verification	B6	04	01
	Verify and Transmit	B6	04	02
	Verify but Do Not Transmit	B6	04	03
Code 93	Enable	B7	01	0E
	Disable	B7	01	0D
Code 32	Enable	B8	01	0E
	Disable	B8	01	0D
Code 11	Enable	B9	01	0E
	Disable	B9	01	0D
Codabar	Enable	BA	01	0E
	Disable	BA	01	0D
	No Verification	BA	02	01
	Verify and Transmit	BA	02	02
	Verify but Do Not Transmit	BA	02	03
	Transmit Start/Stop Characters	BA	03	0E
	Do Not Transmit Start/Stop Characters	BA	03	0D

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Function		Identifier	Command	Data
Plessey	Enable	BB	01	0E
	Disable	BB	01	0D
MSI Plessey	Enable	BC	01	0E
	Disable	BC	01	0D
	No Verification	BC	02	01
	Mod 10 Check	BC	02	02
	Mod 10/10 Check	BC	02	03
	Mod 11/10 Check	BC	02	04
	Transmit Check Digit	BC	03	0E
	Do Not Transmit Check Digit	BC	03	0D
Interleaved 2 of 5	Enable	BD	01	0E
	Disable	BD	01	0D
	No Verification	BD	02	01
	Verify and Transmit	BD	02	02
	Verify but Do Not Transmit	BD	02	03

tipcode 顶码
专业扫码,优选顶码!

Function		Identifier	Command	Data
IATA 2 of 5	Enable	BE	01	0E
	Disable	BE	01	0D
Matrix 2 of 5	Enable	BF	01	0E
	Disable	BF	01	0D
Straight 2 of 5	Enable	D0	01	0E
	Disable	D0	01	0D
Pharmacode	Enable	D1	01	0E
	Disable	D1	01	0D
GS1 DataBar 14	Enable	D2	01	0E
	Disable	D2	01	0D
GS1 DataBar 14 Stacked	Enable	D2	02	0E
	Disable	D2	02	0D
GS1 DataBar Expanded	Enable	D3	01	0E
	Disable	D3	01	0D
GS1 DataBar Expanded Stacked	Enable	D3	02	0E
	Disable	D3	02	0D

tipcode 顶码
专业扫码,优选顶码!

Function		Identifier	Command	Data
GS1 DataBar Limited	Enable	D4	01	0E
	Disable	D4	01	0D
CC-A	Enable	D5	01	0E
	Disable	D5	01	0D
CC-B	Enable	D6	01	0E
	Disable	D6	01	0D
CC-C	Enable	D7	01	0E
	Disable	D7	01	0D
PDF 417	Enable	D8	01	0E
	Disable	D8	01	0D
Micro PDF 417	Enable	D9	01	0E
	Disable	D9	01	0D
Data Matrix	Enable	DA	01	0E
	Disable	DA	01	0D
Rectangular Data Matrix	Enable	DA	03	0E
	Disable	DA	03	0D

tipcode 顶码
专业扫码,优选顶码!

Function		Identifier	Command	Data
QR	Enable	DB	01	0E
	Disable	DB	01	0D
Micro QR	Enable	DC	01	0E
	Disable	DC	01	0D
Aztec	Enable	DD	01	0E
	Disable	DD	01	0D
MaxiCode	Enable	DE	01	0E
	Disable	DE	01	0D

tipcode 顶码
专业扫码,优选顶码!

Appendix 1 Decimal Digits



0



5



1



6



2



7



3



8



4



9

tipcode 顶码
专业扫码,优选顶码!

Appendix 2 Symbology Setup Barcodes



UPC A



UPC E



EAN 8



EAN 13



Code 128



Code 39



Code 93



Code 32

tipcode 顶码
专业扫码,优选顶码!

Appendix 2 Symbology Setup Barcodes



Code 11



Codabar



Plessey



MSI Plessey



Interleaved 2 of 5



IATA 2 of 5



Matrix 2 of 5



Straight 2 of 5

tipcode 顶码
专业扫码,优选顶码!

Appendix 2 Symbology Setup Barcodes



Pharmacode



GS1 DataBar 14



GS1 DataBar Expanded



GS1 DataBar Limited



GS1 DataBar 14 Stacked



GS1 DataBar Expanded Stacked



Composite Code-A



Composite Code-B

tipcode 顶码
专业扫码,优选顶码!

Appendix 2 Symbology Setup Barcodes



Composite Code-C



PDF417



Micro PDF417



Data Matrix



QR



Micro QR



Aztec



MaxiCode

tipcode 顶码
专业扫码,优选顶码!

Appendix 3 ASCII Code Table

Hexadecimal	Decimal	ASCII	Function Key Mapping		
			Disable	**Ctrl Char Mode**	**Alt+Unicode Mode**
00	0	NUL	Null	Ctrl+@	Alt + 000
01	1	SOH	Home	Ctrl+A	Alt + 001
02	2	STX	End	Ctrl+B	Alt + 002
03	3	ETX	Up Arrow	Ctrl+C	Alt + 003
04	4	EOT	Down Arrow	Ctrl+D	Alt + 004
05	5	ENQ	Left Arrow	Ctrl+E	Alt + 005
06	6	ACK	Right Arrow	Ctrl+F	Alt + 006
07	7	BEL	Null	Ctrl+G	Alt + 007
08	8		Backspace	Backspace	Alt + 008
09	9		TAB	TAB	Alt + 009
0A	10	LF	Null	Ctrl+J	Alt + 010
0B	11	VT	Null	Ctrl+K	Alt + 011
0C	12	FF	Null	Ctrl+L	Alt + 012
0D	13		**Enter**	**Enter**	**Enter**
0E	14	SO	Page Up	Ctrl+N	Alt + 014
0F	15	SI	Page Down	Ctrl+O	Alt + 015

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	Function Key Mapping		
			Disable	Ctrl Char Mode	Alt+Unicode Mode
10	16	DLE	F11	Ctrl+P	Alt + 016
11	17	DC1	Null	Ctrl+Q	Alt + 017
12	18	DC2	Null	Ctrl+R	Alt + 018
13	19	DC3	Null	Ctrl+S	Alt + 019
14	20	DC4	Null	Ctrl+T	Alt + 020
15	21	NAK	F12	Ctrl+U	Alt + 021
16	22	SYN	F1	Ctrl+V	Alt + 022
17	23	ETB	F2	Ctrl+W	Alt + 023
18	24	CAN	F3	Ctrl+X	Alt + 024
19	25	EM	F4	Ctrl+Y	Alt + 025
1A	26	SUB	F5	Ctrl+Z	Alt + 026
1B	27	ESC	F6	Ctrl+[	Alt + 027
1C	28	FS	F7	Ctrl+\	Alt + 028
1D	29	GS	F8	Ctrl+]	Alt + 029
1E	30	RS	F9	Ctrl+^	Alt + 030
1F	31	US	F10	Ctrl+_	Alt + 031

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
20	32	SPACE	
21	33	!	
22	34	"	
23	35	#	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
24	36	$	
25	37	%	
26	38	&	
27	39	'	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
28	40	(	
29	41	)	
2A	42	*	
2B	43	+	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
2C	44	,	
2D	45	-	
2E	46	.	
2F	47	/	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
30	48	0	
31	49	1	
32	50	2	
33	51	3	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
34	52	4	
35	53	5	
36	54	6	
37	55	7	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
38	56	8	
39	57	9	
3A	58	:	
3B	59	;	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
3C	60	<	
3D	61	=	
3E	62	>	
3F	63	?	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
40	64	@	
41	65	A	
42	66	B	
43	67	C	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
44	68	D	
45	69	E	
46	70	F	
47	71	G	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
48	72	H	
49	73	I	
4A	74	J	
4B	75	K	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
4C	76	L	
4D	77	M	
4E	78	N	
4F	79	O	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
50	80	P	
51	81	Q	
52	82	R	
53	83	S	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
54	84	T	
55	85	U	
56	86	V	
57	87	W	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
58	88	X	
59	89	Y	
5A	90	Z	
5B	91	[	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
5C	92	\	
5D	93	]	
5E	94	^	
5F	95	_	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
60	96	`	
62	97	a	
62	98	b	
63	99	c	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
64	100	d	
65	101	e	
66	102	f	
67	103	g	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
68	104	h	
69	105	i	
6A	106	j	
6B	107	k	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
6C	108	l	
6D	109	m	
6E	110	n	
6F	111	o	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
70	112	p	
71	113	q	
72	114	r	
73	115	s	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
74	116	t	
75	117	u	
76	118	v	
77	119	w	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
78	120	x	
79	121	y	
7A	122	z	
7B	123	{	

tipcode 顶码
专业扫码,优选顶码!

Hexadecimal	Decimal	ASCII	
7C	124	|	
7D	125	}	
7E	126	~	
7F	127	Delete	

tipcode 顶码
专业扫码,优选顶码!

Appendix 4 Function Keys



Insert



Delete



Home



End



Up Arrow



Down Arrow

tipcode 顶码
专业扫码,优选顶码!



Left Arrow



Right Arrow



Shift



ESC



Ctrl



Alt

tipcode 顶码
专业扫码,优选顶码!



Page Up



Page Down



F1



F2



F3



F4

tipcode 顶码
专业扫码,优选顶码!



F5



F6



F7



F8



F9



F10



F11



F12