

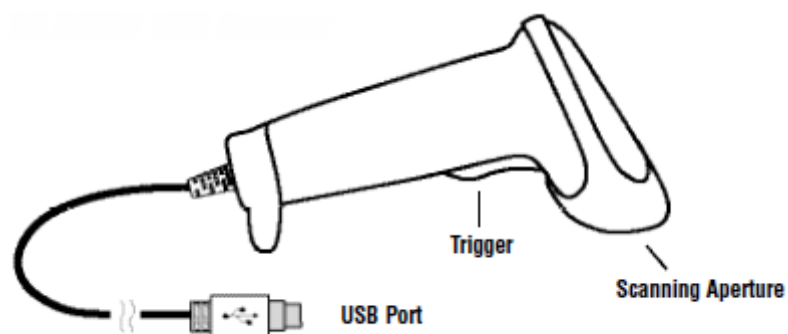
# Wasp WDI4500

---



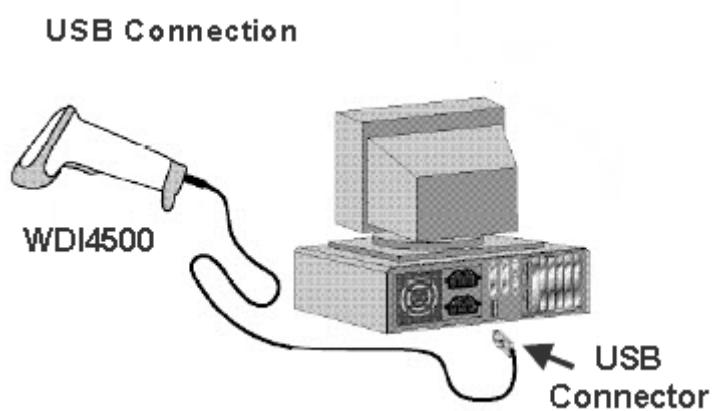
---

## Scanner Example



---

## Connecting the Cable

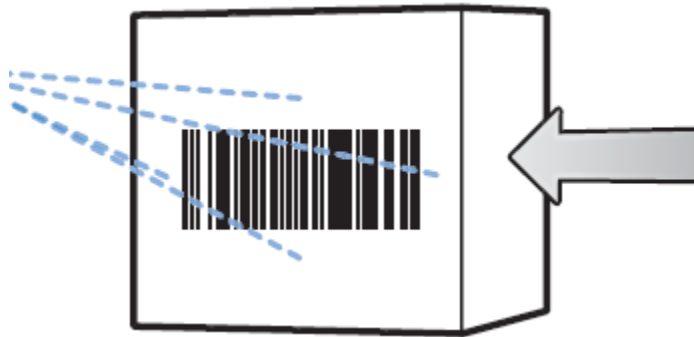


---

# Scanning

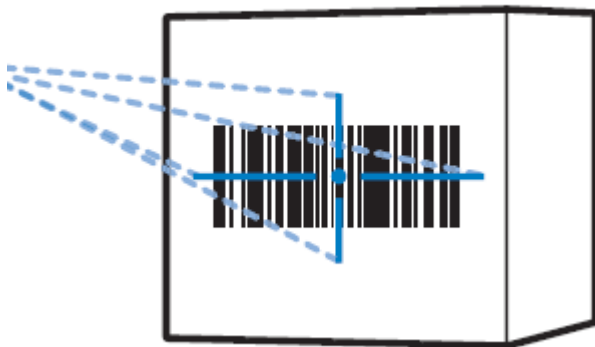
## Hands-Free Scanning

The digital scanner is in hands-free (presentation) mode when it sits on a countertop, or when it is mounted on a wall in the wall mount bracket. In this mode, the digital scanner operates in continuous (constant-on) mode, where it automatically decodes a bar code presented in its field of view.



## Hand-Held Scanning

When lifted off the counter or removed from the wall mount bracket, the WDI4500 operates in standard trigger mode. Aim the digital scanner at a bar code and pull the trigger to decode.

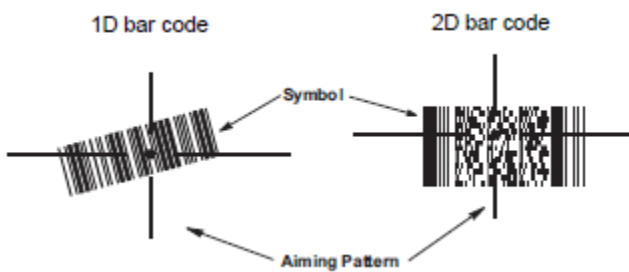


### Aiming

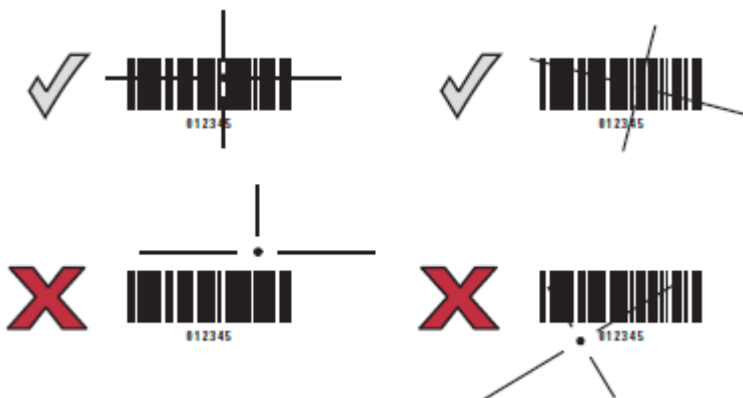
When scanning, the digital scanner projects a red laser aiming pattern which allows positioning the bar code within its field of view. See Decode Ranges on page 2-8 for the proper distance to achieve between the digital scanner and a bar code.



To scan a bar code, center the symbol in any orientation within the aiming pattern. Be sure the entire symbol is within the rectangular area formed by the cross pattern.



The digital scanner can also read a bar code presented within the aiming pattern but not centered. The top examples in the figure below show acceptable aiming options, while the bottom examples can not be decoded.



---

## Scanner Programming Barcodes

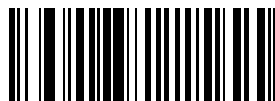


Reset Defaults

### Beep After Good Decode



\*Beep After Good Decode



Do Not Beep After Good Decode  
(Disable)

---

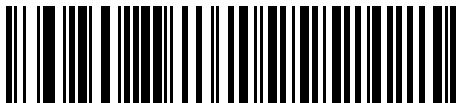
## USB Host



**\*Symbol Native API (SNAPI) with Imaging Interface**



**Symbol Native API (SNAPI) without Imaging Interface**



**HID Keyboard Emulation**

**\*Default**

### Symbology Barcodes

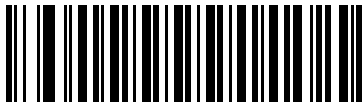
This section provides the following information:

- **Enable/Disable Barcodes** - These barcodes allow you to enable or disable symbologies.
- **Check Digit Barcodes** - The check digit is the last character of the symbol used to verify the integrity of the data. It is always verified to guarantee the integrity of the data (applies to UPC-A/UPC-E and Code 39 only).
- **Preamble Barcodes** - Preamble characters are part of the UPC symbol consisting of Country Code and System character. Three options are given for transmitting UPC-A preamble to the host device: transmit System Character only, transmit System Character and Country Code ("0" for USA) and no preamble transmitted (applies to UPC-A/UPC-E only).
- **Conversion Barcodes** - Allow you to convert UPC and Code 39 barcodes.

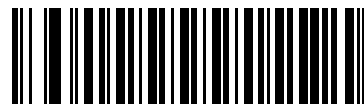
\*Denotes default value.

### UPC/EAN

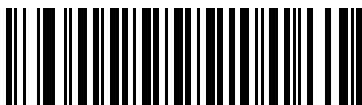
#### Enable/Disable UPC-A/UPC-E



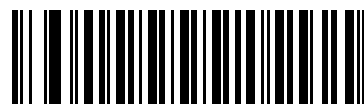
\*Enable UPC-A



Disable UPC-A



\*Enable UPC-E



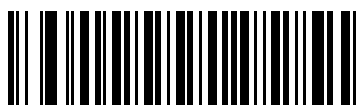
Disable UPC-E

## WDI4500 Quick Start Guide

### Enable/Disable UPC-E1



Enable UPC-E1



\*Disable UPC-E1

### Enable/Disable EAN-8/JAN-8



\*Enable EAN-8/JAN-8

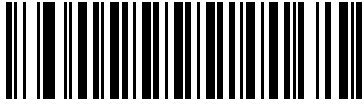


Disable EAN-8/JAN-8

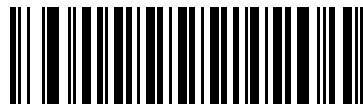


## WDI4500 Quick Start Guide

### Enable/Disable EAN-13/JAN-13

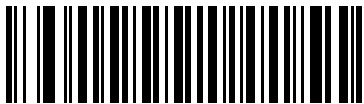


**\* Enable EAN-13/JAN-13**



**Disable EAN-13/JAN-13**

### Enable/Disable Bookland EAN



**Enable Bookland EAN**



**\* Disable Bookland EAN**

## WDI4500 Quick Start Guide

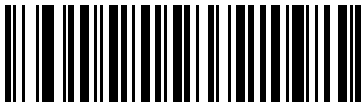
### Decode UPC/EAN/JAN Supplementals



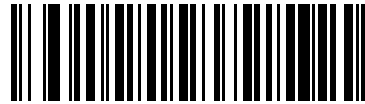
### Decode UPC/EAN/JAN Only With Supplementals



**\*Ignore Supplementals**



### Autodiscriminate UPC/EAN/JAN Supplementals



### Enable 378/379 Supplemental Mode



### Enable 978/979 Supplemental Mode



### Enable 977 Supplemental Mode

## WDI4500 Quick Start Guide

### Decode UPC/EAN/JAN Supplementals (continued)



**Enable 414/419/434/439 Supplemental Mode**



**Enable 491 Supplemental Mode**



**Enable Smart Supplemental Mode**



**Supplemental User-Programmable Type 1**



**Supplemental User-Programmable Type 1 and 2**



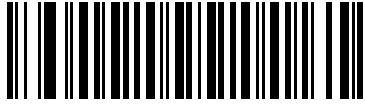
**Smart Supplemental Plus User-Programmable 1**



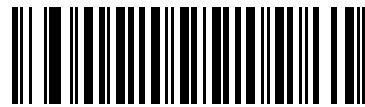
**Smart Supplemental Plus User-Programmable 1 and 2**

## WDI4500 Quick Start Guide

### Transmit UPC-A Check Digit

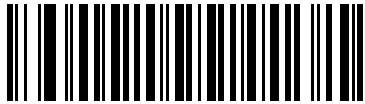


**\*Transmit UPC-A Check Digit**



**Do Not Transmit UPC-A Check Digit**

### Transmit UPC-E Check Digit



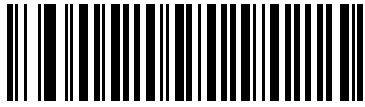
**\*Transmit UPC-E Check Digit**



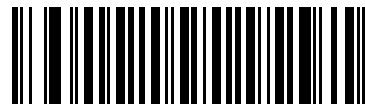
**Do Not Transmit UPC-E Check Digit**

## WDI4500 Quick Start Guide

### Transmit UPC-E1 Check Digit

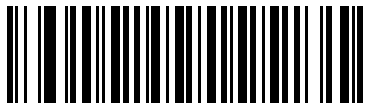


**\*Transmit UPC-E1 Check Digit**



**Do Not Transmit UPC-E1 Check Digit**

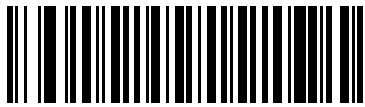
### UPC-A Preamble



**No Preamble (<DATA>)**

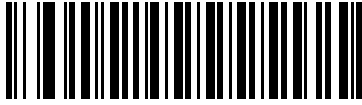


**\*System Character (<SYSTEM CHARACTER>  
<DATA>)**

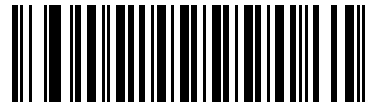


**System Character & Country Code  
(< COUNTRY CODE> <SYSTEM CHARACTER>  
<DATA>)**

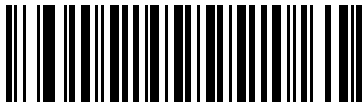
UPC-E Preamble



No Preamble (<DATA>)



\*System Character (<SYSTEM CHARACTER>  
<DATA>)



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

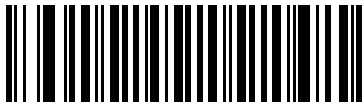
### UPC-E1 Preamble



No Preamble (<DATA>)



\*System Character (<SYSTEM CHARACTER>  
<DATA>)

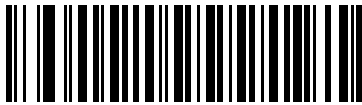


System Character & Country Code  
(< COUNTRY CODE> <SYSTEM CHARACTER>  
<DATA>)

### Convert UPC-E to UPC-A

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

When disabled, UPC-E decoded data is transmitted as UPC-E data, without conversion.



Convert UPC-E to UPC-A (Enable)



\*Do Not Convert UPC-E to UPC-A (Disable)

## WDI4500 Quick Start Guide

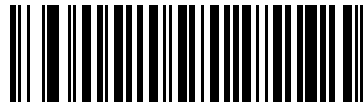
### Convert UPC-E1 to UPC-A

Enable this to convert UPC-E1 decoded data to UPC-A format before transmission. After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

When disabled, UPC-E1 decoded data is transmitted as UPC-E1 data, without conversion.



**Convert UPC-E1 to UPC-A (Enable)**



**\*Do Not Convert UPC-E1 to UPC-A (Disable)**

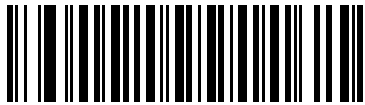


## WDI4500 Quick Start Guide

### **EAN-8/JAN-8 Extend**

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

When disabled, EAN-8 symbols are transmitted as is.



**Enable EAN/JAN Zero Extend**



**\*Disable EAN/JAN Zero Extend**

## WDI4500 Quick Start Guide

### Bookland ISBN Format

If you enabled Bookland EAN using Enable/Disable Bookland EAN on page 5-10, select one of the following formats for Bookland data:

- **Bookland ISBN-10** - The scanner reports Bookland data starting with 978 in traditional 10-digit format with the special Bookland check digit for backward-compatibility. Data starting with 979 is not considered Bookland in this mode.
- **Bookland ISBN-13** - The scanner reports Bookland data (starting with either 978 or 979) as EAN-13 in 13-digit format to meet the 2007 ISBN-13 protocol.



**\*Bookland ISBN-10**



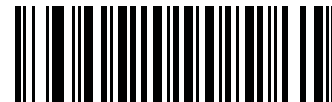
**Bookland ISBN-13**

### ISSN EAN

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



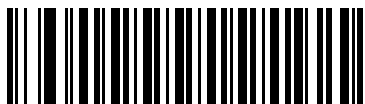
**Enable ISSN EAN**



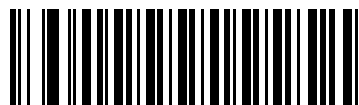
**\*Disable ISSN EAN**

## WDI4500 Quick Start Guide

### Enable/Disable Code 128

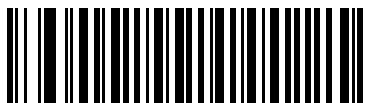


**\*Enable Code 128**



**Disable Code 128**

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



**\*Enable GS1-128**



**Disable GS1-128**

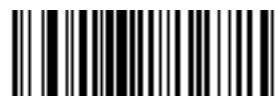
## WDI4500 Quick Start Guide

### Enable/Disable ISBT 128

ISBT 128 is a variant of Code 128 used in the blood bank industry. Scan a bar code below to enable or disable ISBT 128. If necessary, the host must perform concatenation of the ISBT data.



**\*Enable ISBT 128**



**Disable ISBT 128**

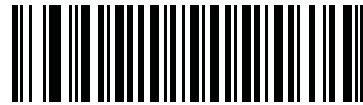
### ISBT Concatenation

Select an option for concatenating pairs of ISBT code types:

- If you select **Disable ISBT Concatenation**, the decoder does not concatenate pairs of ISBT codes it encounters.
- If you select **Enable ISBT Concatenation**, there must be two ISBT codes in order for the decoder to decode and perform concatenation. The decoder does not decode single ISBT symbols.
- If you select **Autodiscriminate ISBT Concatenation**, the decoder decodes and concatenates pairs of ISBT codes immediately. If only a single ISBT symbol is present, the decoder must decode the symbol the number of times set via ISBT Concatenation Redundancy before transmitting its data to confirm that there is no additional ISBT symbol.



**\*Disable ISBT Concatenation**



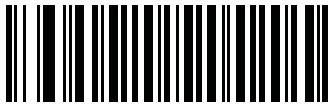
**Enable ISBT Concatenation**



**Autodiscriminate ISBT Concatenation**

### Check ISBT Table

The ISBT specification includes a table that lists several types of ISBT bar codes that are commonly used in pairs. If you set **ISBT Concatenation** to **Enable**, enable **Check ISBT Table** to concatenate only those pairs found in this table. Other types of ISBT codes are not concatenated.



\*Enable Check ISBT Table



Disable Check ISBT Table

### ISBT Concatenation Redundancy

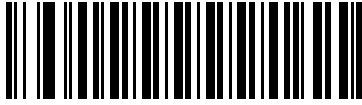
If you set **ISBT Concatenation** to **Autodiscriminate**, use this parameter to set the number of times the digital scanner must decode an ISBT symbol before determining that there is no additional symbol.

Scan the bar code below, then scan two numeric bar codes in Appendix A, Numeric Barcodes to set a value between 2 and 20. Enter a leading zero for single digit numbers. To correct an error or change a selection, scan Cancel Barcode on page A-3. The default is 10.

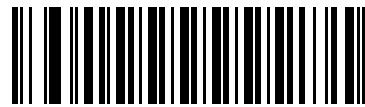


ISBT Concatenation Redundancy

### Enable/Disable Code 39



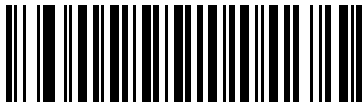
**\*Enable Code 39**



**Disable Code 39**

### Enable/Disable Trioptic Code 39

Trioptic Code 39 is a variant of Code 39 used in the marking of computer tape cartridges. Trioptic Code 39 symbols always contain six characters.



**Enable Trioptic Code 39**



**\*Disable Trioptic Code 39**

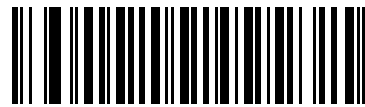
## WDI4500 Quick Start Guide

### Convert Code 39 to Code 32

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry.

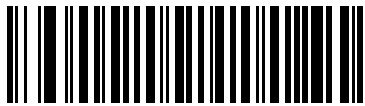


**Enable Convert Code 39 to Code 32**

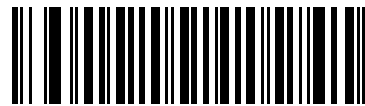


**\*Disable Convert Code 39 to Code 32**

### Code 32 Prefix



**Enable Code 32 Prefix  
(01h)**

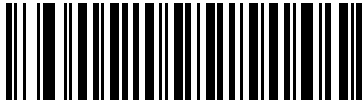


**\*Disable Code 32 Prefix  
(00h)**

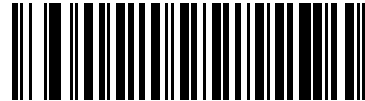


### Code 39 Check Digit Verification

When this feature is enabled, the decoder checks the integrity of all Code 39 symbols to verify that the data complies with specified check digit algorithm. Only Code 39 symbols which include a modulo 43 check digit are decoded. Enable this feature if the Code 39 symbols contain a Modulo 43 check digit.

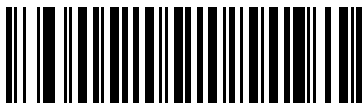


**Enable Code 39 Check Digit**



**\*Disable Code 39 Check Digit**

### Transmit Code 39 Check Digit



**Transmit Code 39 Check Digit (Enable)**



**\*Do Not Transmit Code 39 Check Digit (Disable)**

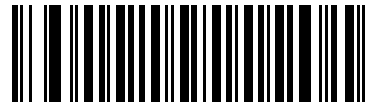
## WDI4500 Quick Start Guide

### Code 39 Full ASCII Conversion

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

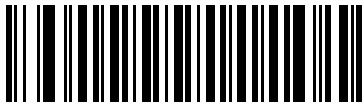


**Enable Code 39 Full ASCII**

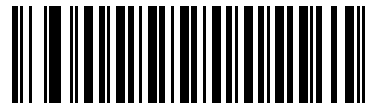


**\*Disable Code 39 Full ASCII**

### Enable/Disable Code 93

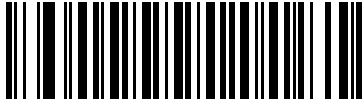


**Enable Code 93**

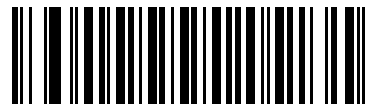


**\*Disable Code 93**

**Enable/Disable Code 11**



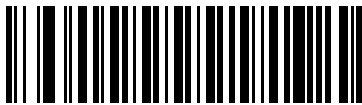
**Enable Code 11**



**\*Disable Code 11**

**Interleaved 2 of 5 (ITF)**

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



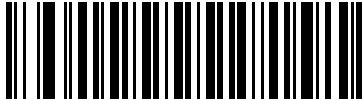
**\*Enable Interleaved 2 of 5**



**Disable Interleaved 2 of 5**

**Discrete 2 of 5 (DTF)**

*Enable/Disable Discrete 2 of 5*



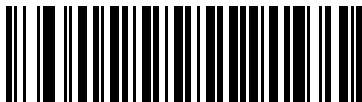
**Enable Discrete 2 of 5**



**\*Disable Discrete 2 of 5**

**Codabar (NW - 7)**

*Enable/Disable Codabar*



**Enable Codabar**

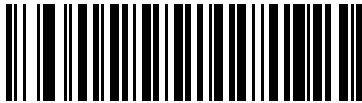


**\*Disable Codabar**

### **GS1 DataBar (formerly RSS, Reduced Space Symbology)**

The variants of GS1 DataBar are DataBar-14, DataBar Expanded, and DataBar Limited. The limited and expanded versions have stacked variants. Scan the appropriate bar code below to enable or disable each variant of GS1 DataBar.

#### ***GS1 DataBar-14***

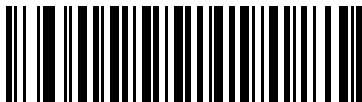


**\*Enable GS1 DataBar-14**



**Disable GS1 DataBar-14**

#### ***GS1 DataBar Limited***

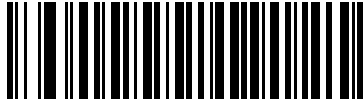


**\*Enable GS1 DataBar Limited**

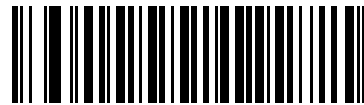


**Disable GS1 DataBar Limited**

### ***GS1 DataBar Expanded***



**\*Enable GS1 DataBar Expanded**

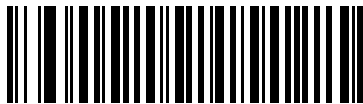


**Disable GS1 DataBar Expanded**

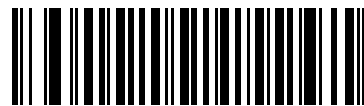
### ***Convert GS1 DataBar to UPC/EAN***

This parameter only applies to GS1 DataBar-14 and GS1 DataBar Limited symbols not decoded as part of a Composite symbol. Enable this to strip the leading '010' from GS1 DataBar-14 and GS1 DataBar Limited symbols encoding a single zero as the first digit, and report the bar code as EAN-13.

For bar codes beginning with two or more zeros but not six zeros, this parameter strips the leading '0100' and reports the bar code as UPC-A. The UPC-A Preamble parameter that transmits the system character and country code applies to converted bar codes. Note that neither the system character nor the check digit can be stripped.



**Enable Convert GS1 DataBar to UPC/EAN**



**\*Disable Convert GS1 DataBar to UPC/EAN**

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## 2D Symbolologies

### Enable/Disable PDF417



**\*Enable PDF417**



**Disable PDF417**

### Enable/Disable MicroPDF417



**Enable MicroPDF417**



**\*Disable MicroPDF417**

### Code 128 Emulation

When this parameter is enabled, the scanner transmits data from certain MicroPDF417 symbols as if it was encoded in Code 128 symbols. Transmit AIM Symbology Identifiers must be enabled for this parameter to work.

If Code 128 Emulation is enabled, these MicroPDF417 symbols are transmitted with one of the following prefixes:

- ]C1        if the first codeword is 903-905
- ]C2        if the first codeword is 908 or 909
- ]C0        if the first codeword is 910 or 911

If disabled, they are transmitted with one of the following prefixes:

- ]L3        if the first codeword is 903-905
- ]L4        if the first codeword is 908 or 909
- ]L5        if the first codeword is 910 or 911

Scan a bar code below to enable or disable Code 128 Emulation.



**NOTE** Linked MicroPDF codewords 906, 907, 912, 914, and 915 are not supported. Use GS1 Composites instead.



**Enable Code 128 Emulation**



**\*Disable Code 128 Emulation**



## Data Matrix



**\*Enable Data Matrix**



**Disable Data Matrix**

### Data Matrix Inverse

This parameter sets the Data Matrix inverse decoder setting. Options are:

- **Regular Only** - the scanner decodes regular Data Matrix bar codes only.
- **Inverse Only** - the scanner decodes inverse Data Matrix bar codes only.
- **Inverse Autodetect** - the scanner decodes both regular and inverse Data Matrix bar codes.



**\*Regular**



**Inverse Only**



**Inverse Autodetect**

### Decode Mirror Images (Data Matrix Only)

Select an option for decoding mirror image Data Matrix bar codes:

- Always - decode only Data Matrix bar codes that are mirror images
- Never - do not decode Data Matrix bar codes that are mirror images
- Auto - decode both mirrored and unmirrored Data Matrix bar codes.



**\*Never**



**Always**



**Auto**

## Maxicode



**\*Enable Maxicode**



**Disable Maxicode**

## QR Code



**\*Enable QR Code**



**Disable QR Code**

### QR Inverse

This parameter sets the QR inverse decoder setting. Options are:

- **Regular Only** - the scanner decodes regular QR bar codes only.
- **Inverse Only** - the scanner decodes inverse QR bar codes only.
- **Inverse Autodetect** - the scanner decodes both regular and inverse QR bar codes.



**\*Regular**



**Inverse Only**



**Inverse Autodetect**

## MicroQR



**\*Enable MicroQR**



**Disable MicroQR**

## Aztec



**\*Enable Aztec**



**Disable Aztec**

### Aztec Inverse

This parameter sets the Aztec inverse decoder setting. Options are:

- **Regular Only** - the scanner decodes regular Aztec bar codes only.
- **Inverse Only** - the scanner decodes inverse Aztec bar codes only.
- **Inverse Autodetect** - the scanner decodes both regular and inverse Aztec bar codes.



**\*Regular**



**Inverse Only**



**Inverse Autodetect**