BARTEC

Configuration of the Scan Module

Quick Start Guide

BARTEC

Quick Start Guide - Translation

Configuration of the Scan Module

with Zebra 123 Scan Utility

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Content	Pages
English	1-51

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Revision history

Changes to the original guide are listed below:

Change	Date	Description
Rev. A	12/2023	Add description for Enable/Disable parameter barcode scanning

1 Scan Module

The Scan Module consists of the following components:

- ZEBRA “SE55 Advanced Range Scan Engine“
- ZEBRA “Decoder Board PL5000“.

The scan engine is controlled internally via the decoder board and can be configured using the 123 Scan Utility.

More information can be found on Zebra homepage:

- 123 Scan Utility (EN) or (DE)
- SE55 Advanced Range Scan Engine (EN) or (DE)
- Decoder Board PL5000 (EN) or (DE)

2 123 Scan Utility

The 123 Scan Utility is a user-friendly, PC-based software tool that enables quick and easy setup of Zebra scanners and the BARTEC Scan Module for the Pixavi Phone.

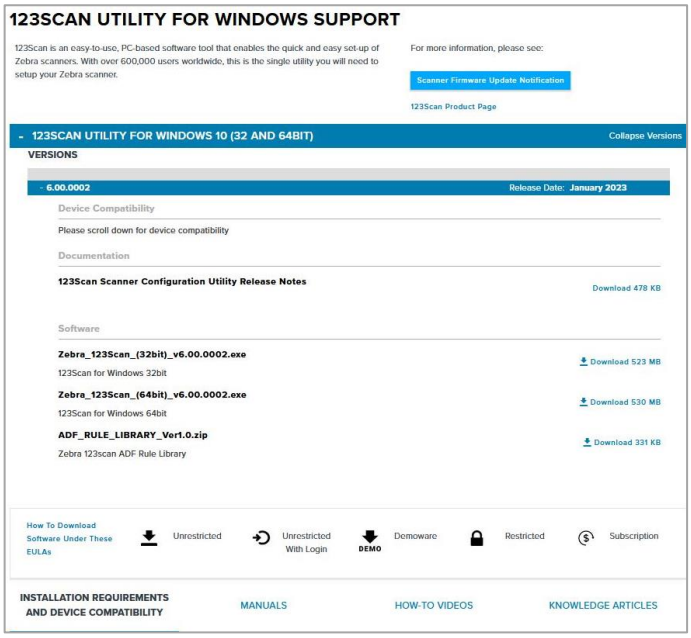
2.1 Download

Zebra Support & Download page for the 123 Scan Utility. (EN) or (DE)

The utility is available free of charge from Zebra Technologies.

The 123 Scan Utility is available as download for Windows PC with 32-bit or 64-bit system.

On the page, you can also find more detailed documentation and help videos about the usage and functions of the 123 Scan Utility.



Example screenshot from 10th February 2023

2.2 System Requirements and Installation:

The current system requirements can be found on the Zebra Support and Download page.

The latest versions are always available there, along with a list of system requirements.

The installation of the 123 Scan Utility is started by running setup.exe.

Choose an installation directory and remember the directory to find your saved configurations later if necessary.

Default configuration location:

C:\Users\Public\Documents\123Scan2\Configuration Files

The application creates a desktop icon if desired.

The following language settings are supported by the utility:

- English
- Chinese

2.3 What can 123 Scan Utility do?

It allows to create a configuration for the Scan Module in offline mode.

The settings are saved in a configuration file that can be printed as a single programming barcode for scanning or emailed to a smartphone to scan from its screen.

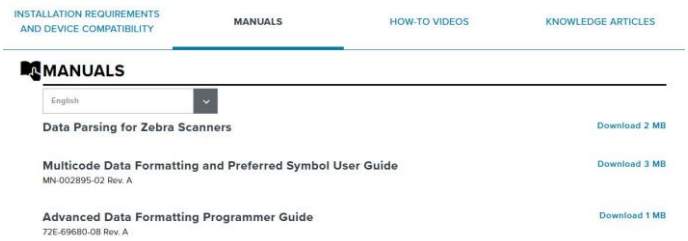
The 123 Scan Utility can be used to perform the following operations:

- Configure the decoder board with the help of a wizard.
    - Program the following decoder settings.
        - Enable/disable symbologies.
    - Modify data before transmitting to a host using:
        - Advanced Data Formatting (ADF) - Scan one barcode per press of the Scan button.
        - Multicode Data Formatting (MDF - Multicode Data Formatting) - Scan multiple barcodes with one press of the scan button (selected decoders).
        - Preferred Symbol (Preferred Symbol) - Read one barcode on one label from many (select decoders).
    - Load the parameter settings of the decoder as follows.
        - Scan Barcode.
        - Scanning a paper barcode.
        - Scanning a barcode from a PC screen.
        - Scanning a barcode from a smartphone screen.

2.4 Documentation and Videos

On the Zebra website for the 123 Scan Utility, you can find further explanations and help in using the 123 Scan Utility in the "Manuals" and "How-to videos" section.

2.4.1 Manuals

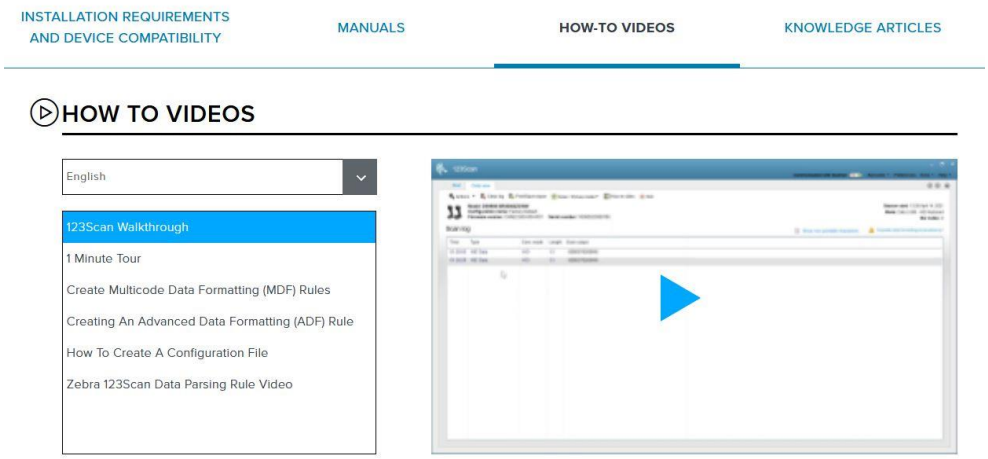


- **Data Parsing for Zebra Scanner**
  What is Data Parsing?
  Data Parsing allows a Zebra scanner to scan a UDI label or GS1 label or Blood Bags with one or more barcodes encoded with multiple data fields (date of manufacture, expiration date, batch number, GTIN, SSCC …) and transmit select data fields and not others, in a specific order to a host application. Simply wave the scanner over all the barcodes while holding the trigger and the scanner will take care of the rest.
  The scanner will find and transmit only the required data fields, even if they are spread across multiple barcodes and on different sides of the container. In addition, the scanner can insert field separators (tab, enter, slash …) to automate data entry into a host application.
- **Multicode Data Formatting (MDF) and Preferred Symbol User Guide**
  MDF
  MDF enables a 2D imaging scanner to scan all the bar codes within a label, with one trigger pull, and then modify and transmit some or all of them to a host application. Have a look into the manual for working MDF examples that can be programmed to a scanner.
  Preferred Symbol
  Preferred Symbol is a bar code prioritization technique. When scanning a label with multiple bar codes, one or
  more bar code(s) can be singled out for decoding while excluding the others. The Preferred Symbol is the only bar code that is decoded and output within a preset time (called the Preferred Symbol Timeout). During this time, the scanner attempts to decode the prioritized bar code and reports only this bar code. With Preferred Symbol only one bar code is output per trigger pull.

- **Advanced Data Formatting (ADF) Programmer Guide**
  Advanced Data Formatting (ADF) is a means of customizing data before transmission to the host device. Use ADF to edit scan data to suit requirements. Implement ADF by scanning a related series of bar codes in the programmer guide, or by installing the 123Scan utility (see the scanner's Product Reference Guide) which allows programming the device with ADF rules.
  Avoid using ADF formatting with bar codes containing more than 60 characters. To add a prefix or suffix value for such bar codes, use the Add Prefix/Suffix setting from the scanner's Product Reference Guide. Using ADF with longer bar codes transmits the bar code in segments of length 252 or less (depending on the host selected), and applies the rule to each segment.

2.4.2 Videos

"How-to videos"



A series of videos helps to understand the basic operation and explains in a simple way how to use the 123 Scan Utility.

3 123 Scan Utility – Main menu

3.1 Structure main menu

The 123 Scan Utility home screen is shown below.

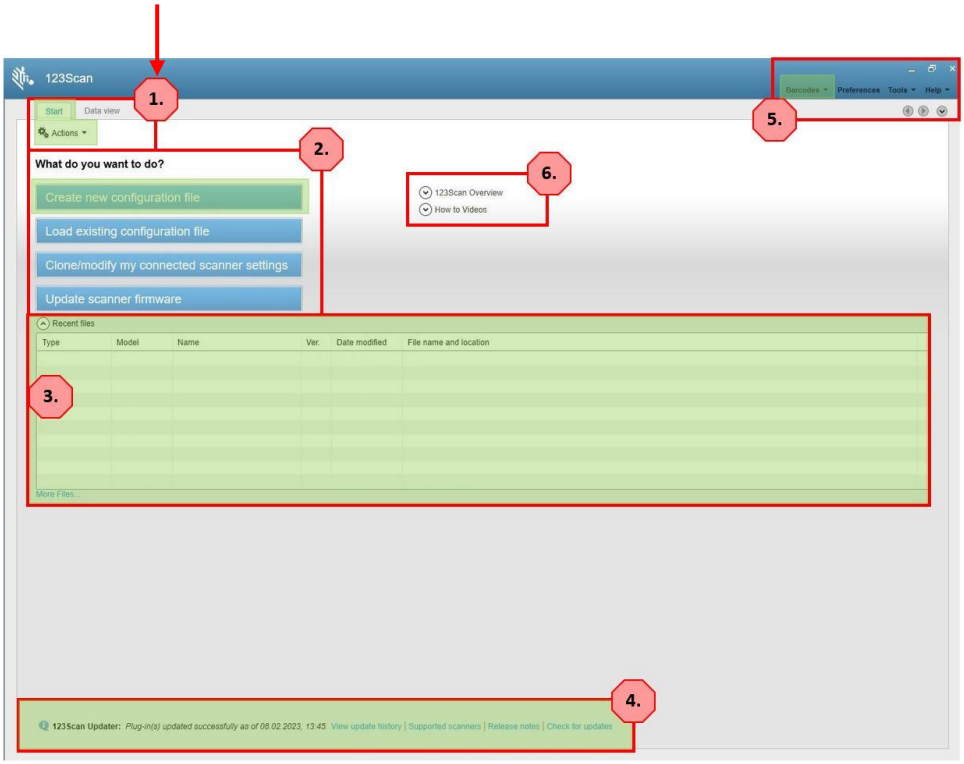
The individual menus are briefly explained here.

Not all of the available menus are required to create a configuration for the Scan Module.

The necessary menus are highlighted in green and described in more detail in this manual.

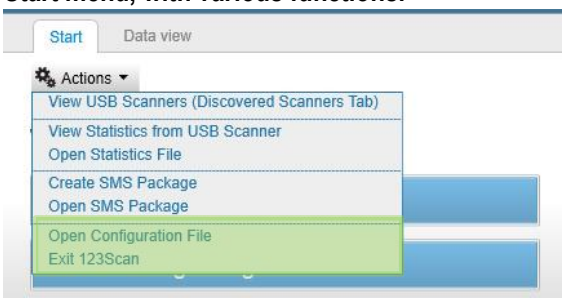
The Scan Module cannot be connected directly to the 123 Scan Utility on the PC. Configuration is only possible in the so-called offline mode.

Chapter 3.1.1 explain:



3.1.1 Menu bar

1. **Start menu, with various functions.**



In combination with the Scan Module, 2 menu items (marked green) can be used.
"Open Configuration File
Open an already existing configuration or import it into the 123 Scan Utility.
"**Exit 123Scan**", exit the utility.
Notice:
The other menu items are not available.

2. "**Data View**"
The menu for viewing data is not available when using the Scan Module.
Note:
To use the menu, a direct connection from the Scan Module to the 123 Scan Utility is required. This is not possible.

3.1.2 Scanner Configuration

With the menu item "**Create new configuration file**" you can create a new configuration for your Scan Module offline.
The file can be saved locally on the PC.
You can print out the configuration as a programmable code and scan it.
The Scan Module consists of:

- 1D/2D SE55 Advanced Range Scan Engine
- Decoder Board PL5000 (is selected in the menu to create a configuration)

The other menu items are not available because the Scan Module cannot be connected directly to the 123 Scan Utility via USB.

3.1.3 Menu for viewing existing configurations.

All existing configurations are displayed in the menu.

Selecting an existing configuration takes you directly to the configuration menu.

Example:

3.1.4 Menu for update and version history of 123 Scan Utility

Here you can view the update and version history of 123 Scan Utility.

With the menu item "Check for updates" you can check if there are new updates available for 123 Scan Utility if you are connected to the internet.

Updates can be:

- 123 Scan Utility version or feature updates
- Updates to different supported scanners and decoder boards (e.g. to the PL5000)
- bug fixes

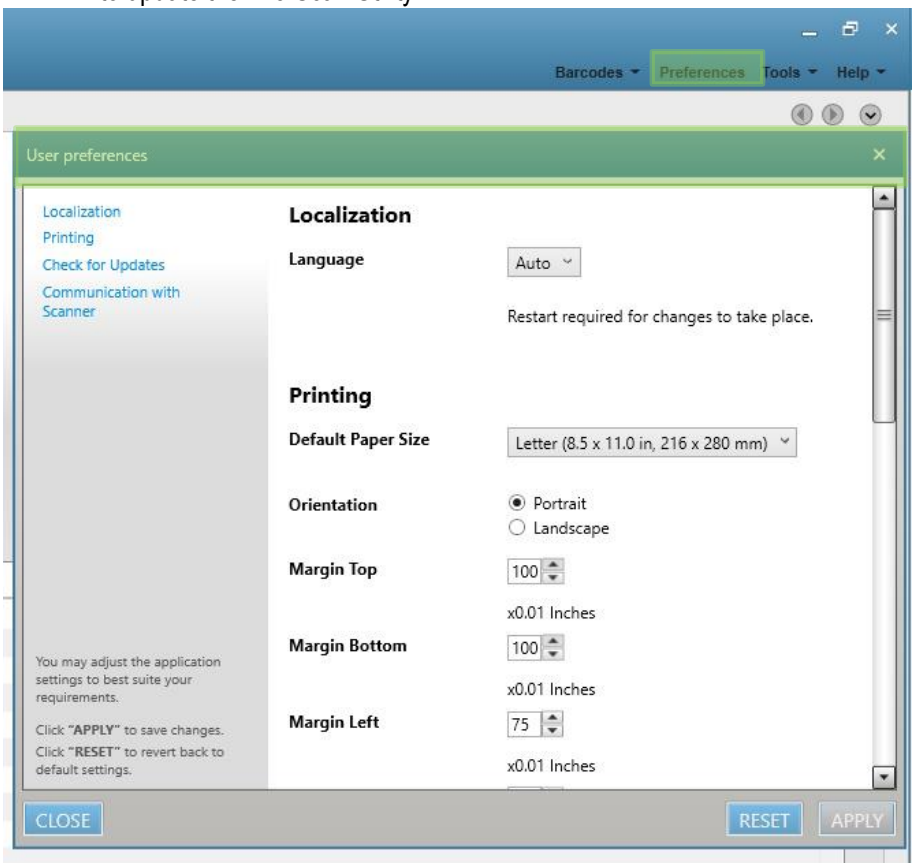
3.1.5 Menu bar for further functions.

Most menu items are not relevant for creating a Scan Module configuration.

1. **Menu – Barcodes**
   "**Print barcodes from configuration file**": Quick access to print an existing configuration as a programmable code.

   The other menu items are not available.

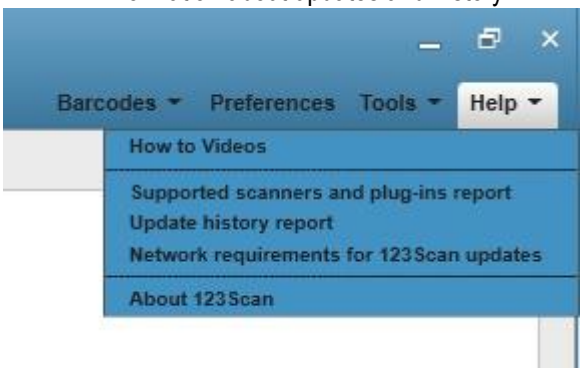
2. **Menu - Preferences**
   In the "**Preferences**" menu, a few general settings for the 123 Scan Utility can be made. E.g.
   - Language (English or Chinese)
   - for printing
   - to update the 123 Scan Utility



3. **Menu "Tools"**
   - "**Data Formatting Library**" is a library of predefined rules for formatting barcodes. This can be created by yourself or predefined rules from Zebra can be inserted.
   - "**Import plug-in into 123 Scan**" updates to supported scanners or decoders can be installed manually as a plugin in the 123 Scan Utility (if there is no Internet connection). Normally, however, the update is done via the automatic update.

   The other menu items are not available.

4. **Menu "Help"**
   - Information about the current version of 123 Scan Utility.
   - Access to help videos.
   - Information about updates and history.



3.1.6 Menu with access to videos and information about 123 Scan Utility.

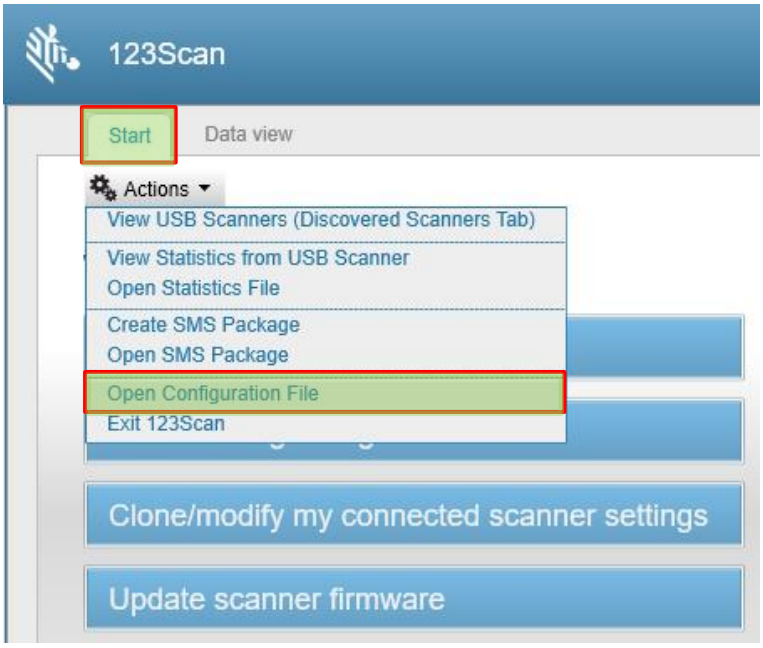
Access an overview and help videos.

4 123 Scan Utility – load existing configuration file

Requirements:

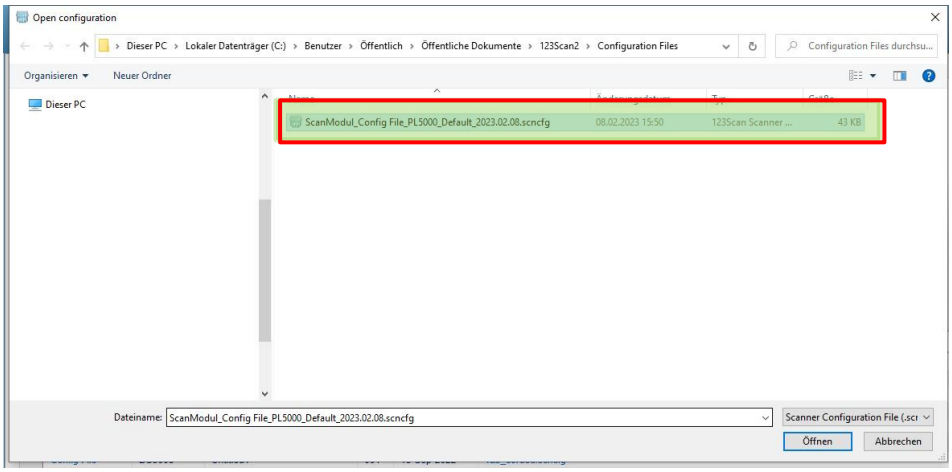
- 123 Scan Utility is installed on your PC.
- A configuration file is stored on your PC.
  Either the configuration file is located in any location or in the 123 Scan Utility directory where the configuration files are stored.

Go to "Start" and select "Open Configuration File".

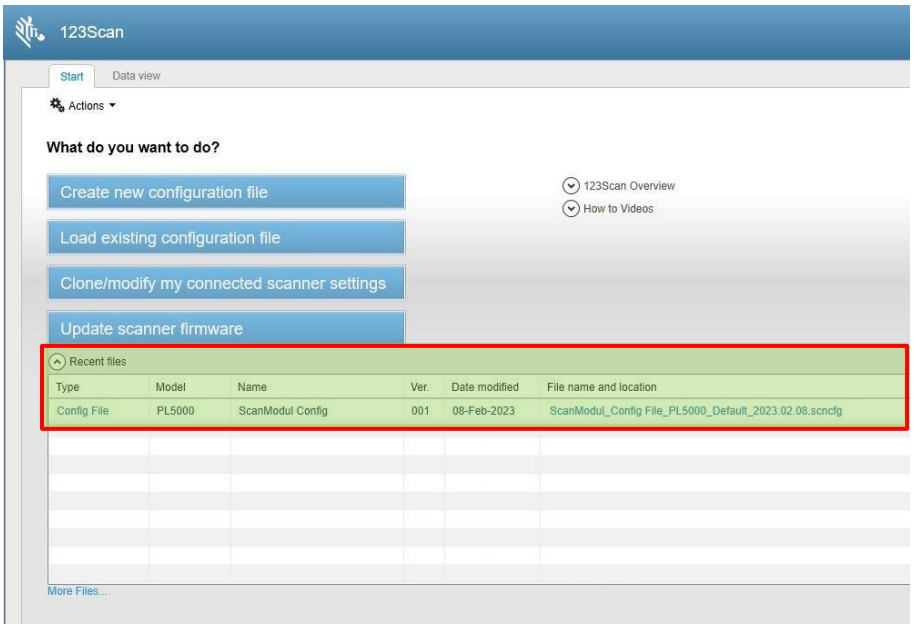


Select the configuration file you want to open.

Example:



The configuration file is loaded into the 123 Scan Utility in the Recent Files window and can be printed as programmable code or customized at any time.



5 Configuration

5.1 Select Scan Module for configuration

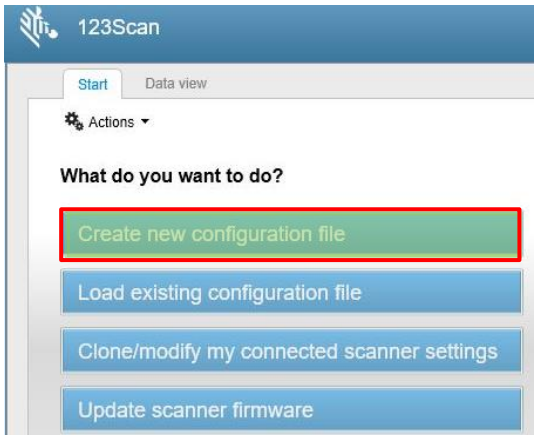
Requirements:

- 123 Scan Utility is installed on your PC.
  Internet connection of 123 Scan Utility is not necessary.
- The configuration is done in offline mode because the Pixavi Phone with Scan Module cannot be connected to 123 Scan Utility via USB.
- The Scan Module consists of the Scan Engine SE55 and the Decoder Board PL5000.
  In the selection menu of 123 Scan Utility the Decoder Board PL5000 Common Model is selected for the configuration.

Finally, the configuration is printed as a programmable code (Word, PDF or paper printout) and transferred to the Scan Module by scanning the barcodes.

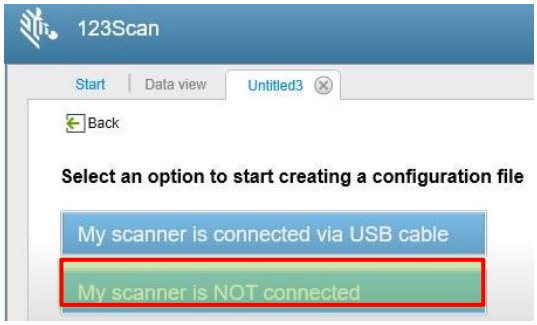
Prepare configuration:

On the 123 Scan Utility startup screen, select "**Create new configuration file**".

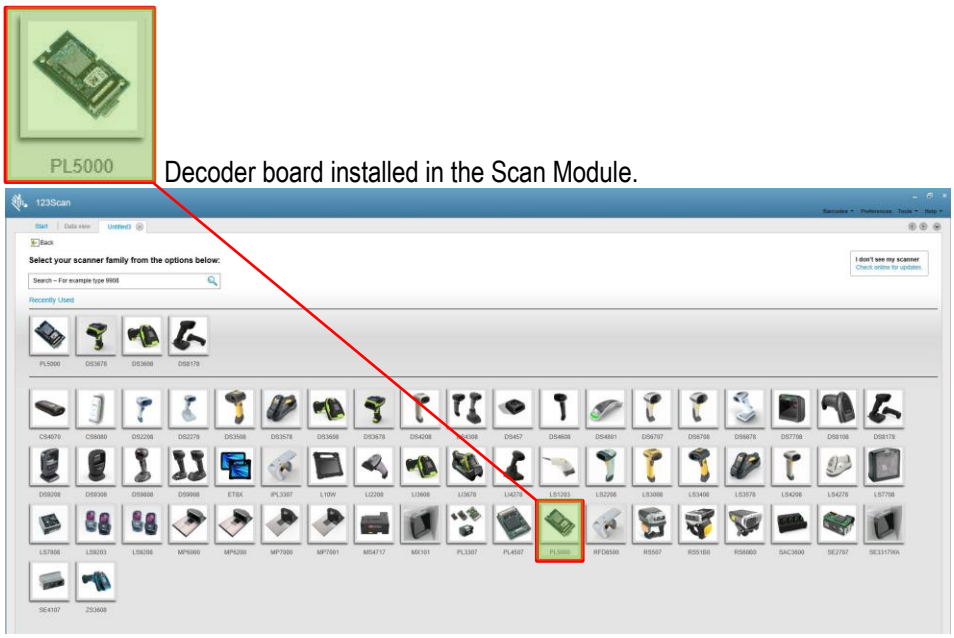


In the next menu, select the option "**My scanner is NOT connected**".

Pixavi Phone with Scan Module cannot be connected to 123 Scan Utility via USB.



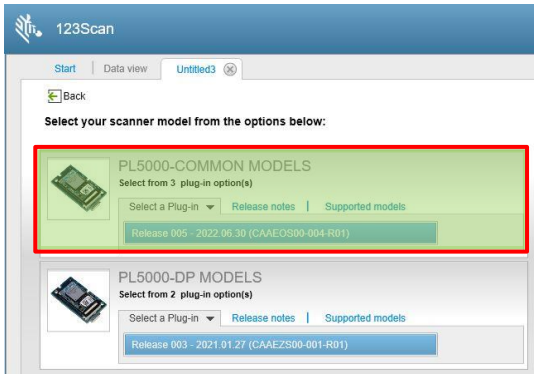
In the selection menu of the scanner models and decoder boards supported by the 123 Scan Utility, select the "**PL5000**".



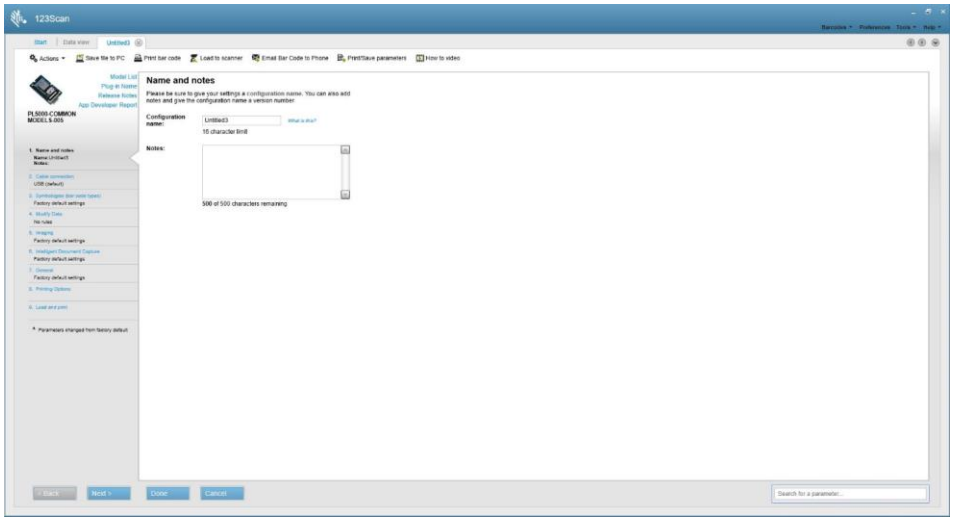
Decoder board installed in the Scan Module.

The selection window displays all scanner models supported by Zebra.

In the following menu, select the "**PL5000 - Common Models**".

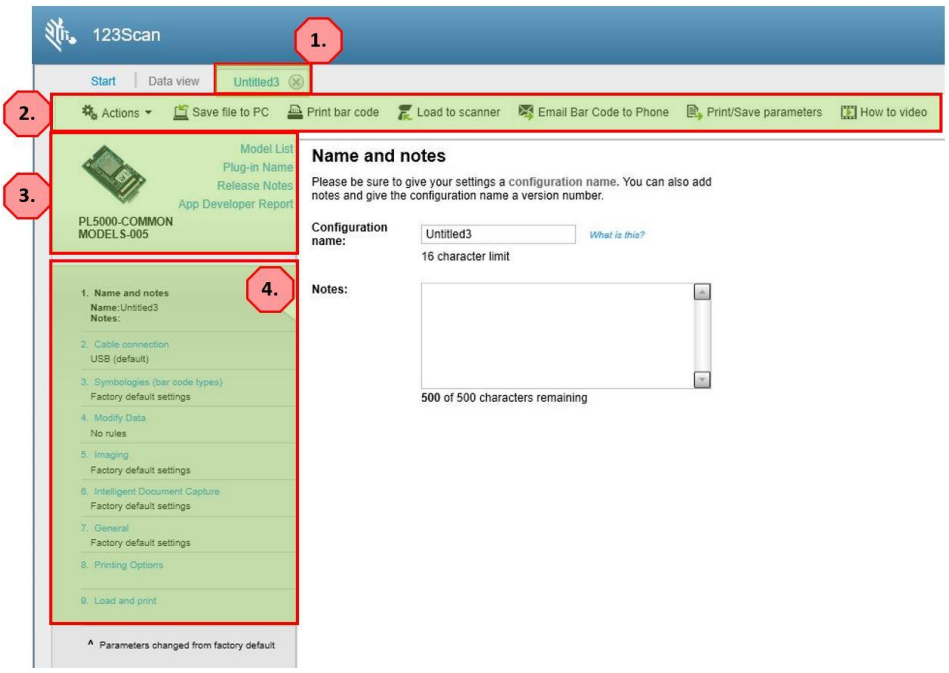


Now you are in the actual menu to create the configuration for the Scan Module.



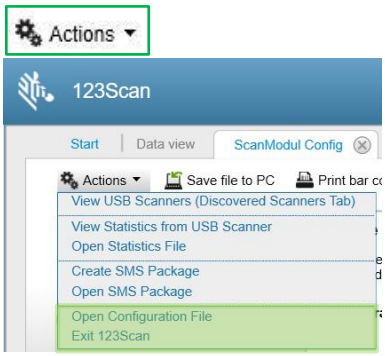
5.2 Structure of the configuration menu

The structure of the configuration menu is shown and explained below.



1. Tab with the name of its configuration.

2. Menu bar with functions for the configuration file.



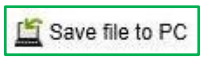
In combination with the Scan Module, two menu items (marked green) can be used.

"Open Configuration File".

Open an already existing configuration or import it into the 123 Scan Utility.

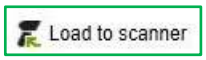
"Exit 123Scan", exit the utility.

The other menu items are not available.



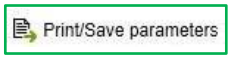
Here you can save your configuration locally on the PC to use it again at any time or to adjust the configuration.

Here you can display and print the configuration as programmable code or save it as Word or PDF.

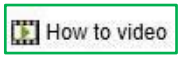


This option is not available because Pixavi Phone with Scan Module cannot be connected to 123 Scan Utility via USB.

You can send/distribute the configuration by email.



Creates a list of all changed parameters and can be saved or printed.



Opens a YouTub web page from Zebra with video instructions for help.

3. General information about the PL5000 decoder board.

4. List of the various configuration options available.
   Each menu item consists of a number of individual parameters which can be adjusted as required.
   Changes made that deviate from the default setting are marked in the menu and on the parameter with the character "^".

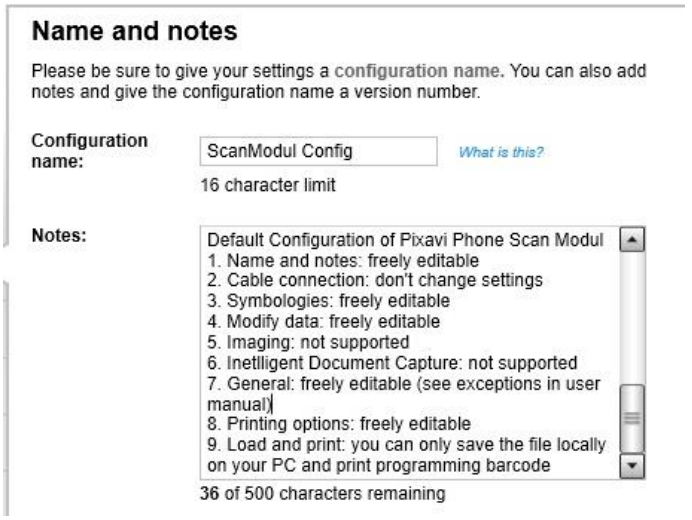
5.3 Create Configuration

In the individual menus you can make your configuration.

Please note that in some menus no changes can be made.

In the following you will get an explanation to each of the menu items and what you have to pay attention to.

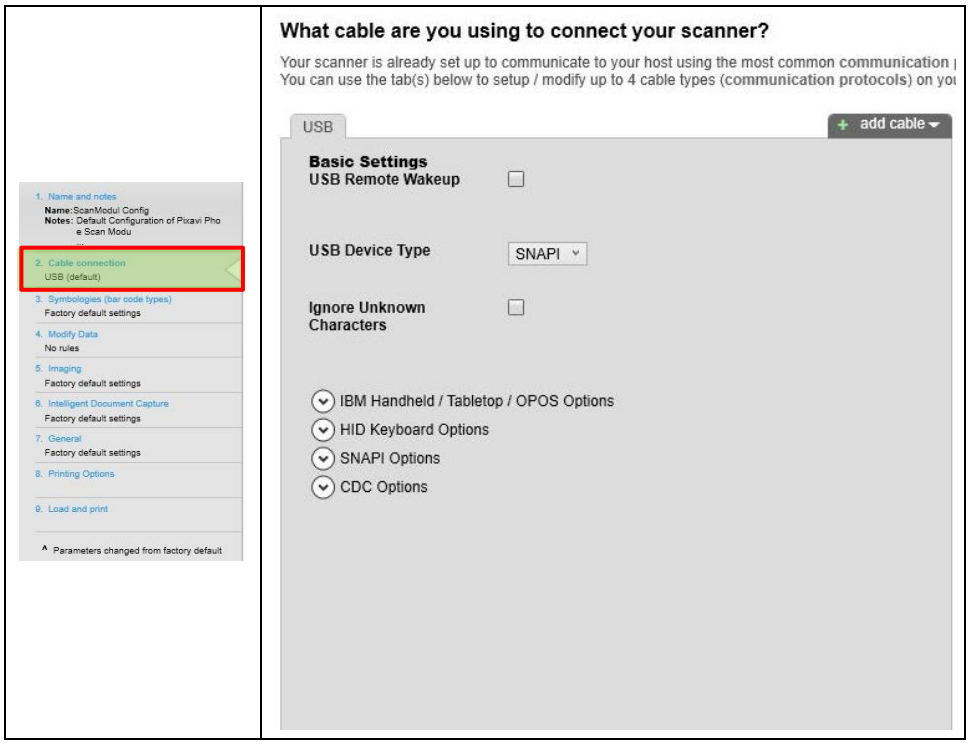
5.3.1 Menu “Name and Notes”



No parameter settings are made in this menu.

The menu is used to give your configuration a new name and to store a description in the "Notes" window.

5.3.2 Menu “Cable connection“



ATENTION

Interruption of communication by changing the interface!

No changes to parameter settings may be made in this menu!

Changes can lead to the communication between

Scan Engine SE55 <--> Decoder Board PL5000 <--> Pixavi Phone

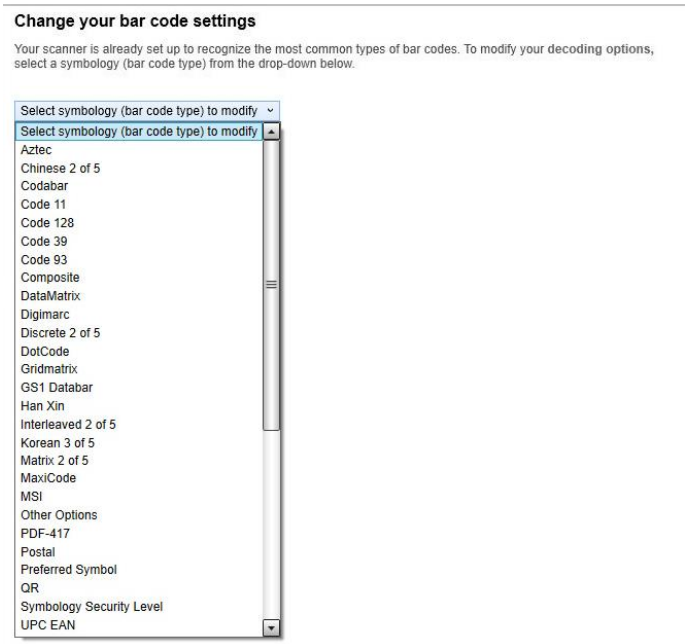
will be interrupted.

This means that barcode data can no longer be transmitted to the Pixavi Phone.

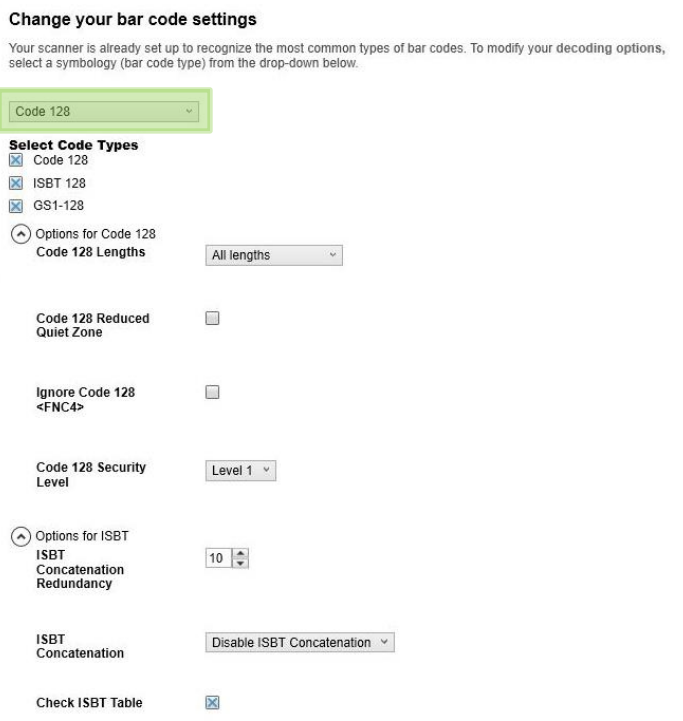
▶ If you accidentally make changes here that cause the communication to be interrupted then you can find instructions on how to reset the Scan Module in the Resetting the Scan Module section.

Make sure that the character "^" does not appear in this menu as shown. This character indicates that parameters have been changed.

5.3.3 Menu “Symbologies (bar code types)“



Example of configuration options based on the Code 128 barcode family.



In this menu the barcode family specific parameters can be adjusted.

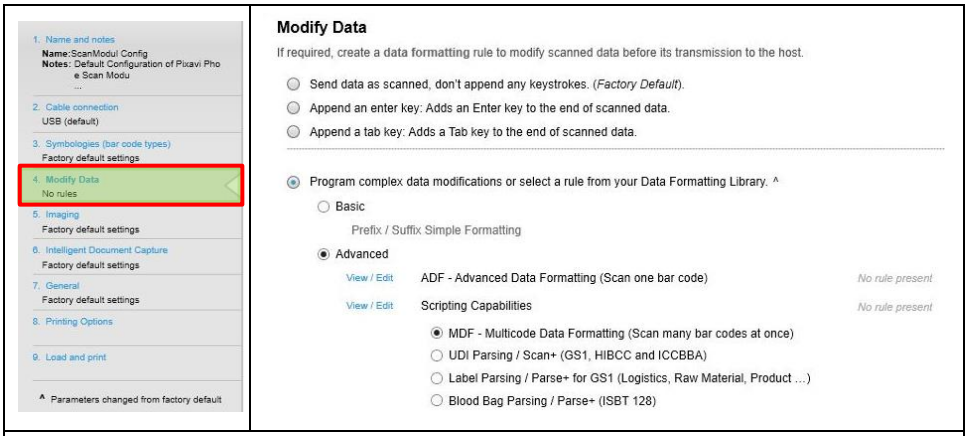
- Enable/Disable Barcode Types/Families
- Adjust barcode type specific parameters such as min. and max. code length, security level and much more.

Not all barcode types/families listed in the 123 Scan Utility are supported by the SE55 and the Decoder Board PL5000. A complete list of all supported codes can be found in the current data sheet.

Not all barcode types/families are already enabled by default. Some have to be activated first to be able to decode.

It is advisable to activate only the barcode types/families that you need in order to keep the decoding/processing times low when capturing. As more barcode types/families are activated, as longer the decoding process can take.

5.3.4 Menu “Modify data“



In this menu you can define how the barcode data is modified and transferred.

There are predefined rules to transfer an Enter or Tab character at the end of the barcode data.

In the factory default setting, no characters or keystrokes are transmitted.

Add Enter:

Scan the following barcode to add an Enter (carriage return/line feed) key after the scanned data.

In the "Basic" formatting you can define whether prefix or suffix are added and transmitted as characters before or after the barcode data.

In the "Advanced" submenu you can create complex rules that allow to modify the barcode data. E.G.

- remove/add characters
- Replace characters
- Set rules that allow capturing up to 20 barcodes (MDF - Multi Data Formatting) with a single scan.
- And much more

There are also predefined rules that can be adapted to your own specifications.

There are separate manuals for ADF and MDF with further explanations and examples. You can find them on the BARTEC support & download page or on the Zebra website for 123 Scan Utility.
Zebra also provides how-to videos that explain how to get started with ADF and MDF.

In Basic Formatting you can specify different combinations and strings of prefix and suffix.

Explanation:

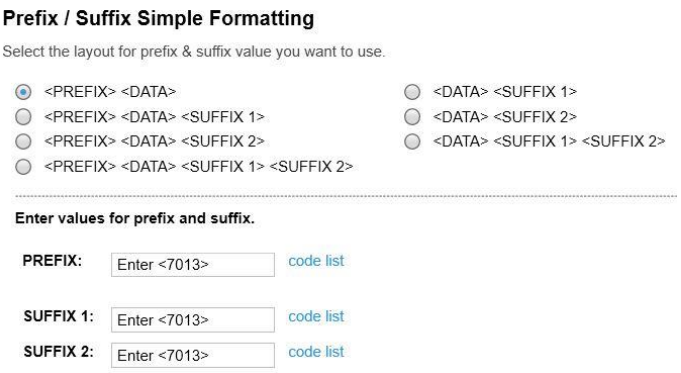
X1234567890YZ

X = Prefix

1234567890 = Barcode data

Y = Suffix 1

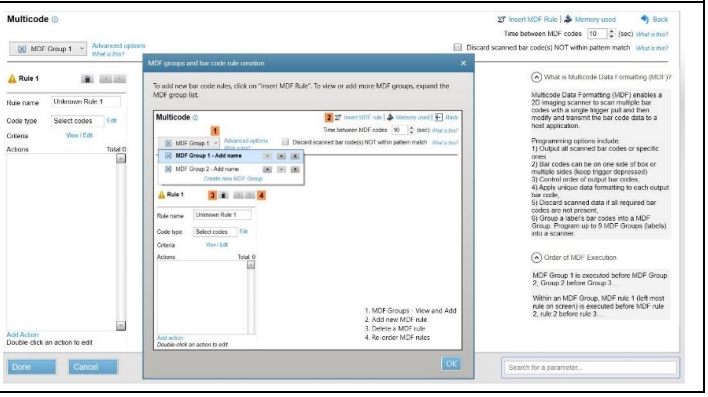
Z = Suffix 2



ADF - Advanced Data Formatting allows the barcode data to be modified and transmitted as the system requires it.

MDF - Multi Data Formatting allows the barcode data to be modified and transmitted as required by the system.

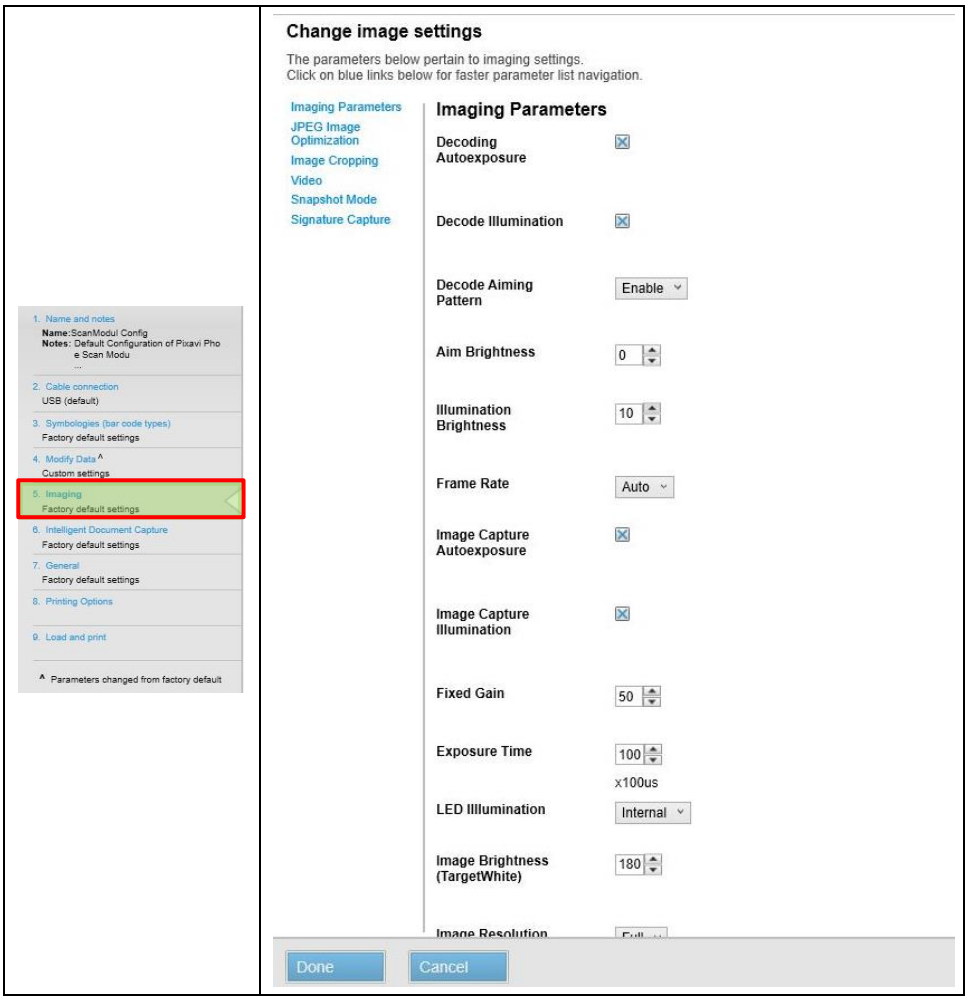
Multiple barcodes can be read at once.



MDF – Multi Data Formatting

Each of the barcodes to be read requires a unique identifier.

5.3.5 Menu “Imaging“



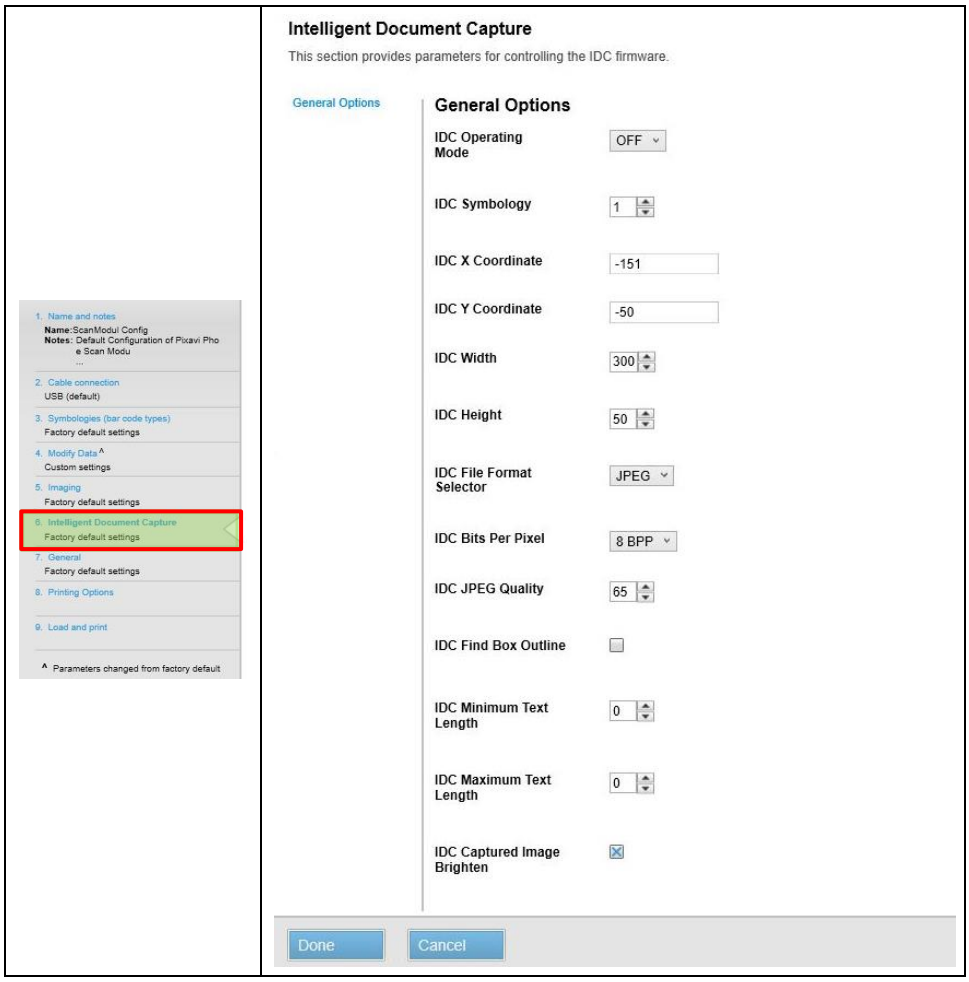
ATTENTION

Capturing images is not supported!

Do not change any settings in this menu.

Make sure that the character "^" does not appear in this menu as shown. This character indicates that parameters have been changed.

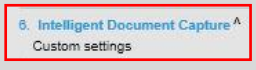
5.3.6 Menu “Intelligent Document Capture“



ATTENTION

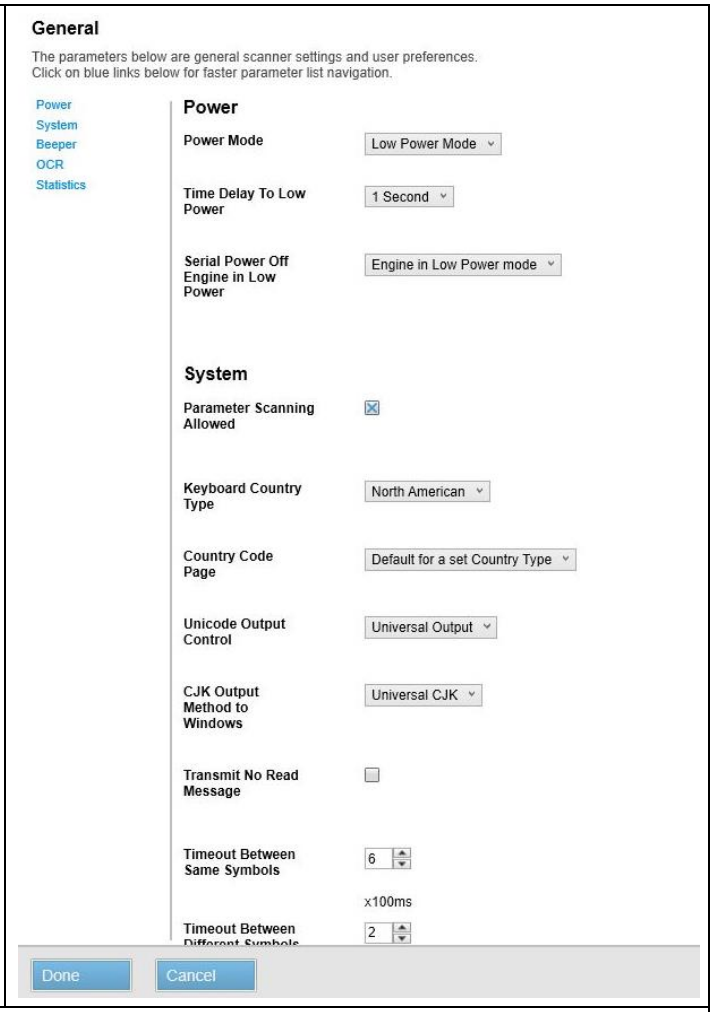
Capturing images and documents is not supported!

Do not change any settings in this menu.



Make sure that the character "^" does not appear in this menu as shown. This character indicates that parameters have been changed.

5.3.7 Menu “General“



In the General menu, you can make settings related to the Scan Engine itself.

There are settings for:

Power

Power settings should not affect the operation of the Scan Engine.

If settings lead to unexpected functioning, you can reset the scan engine to factory settings in the chapter "Resetting the Scan Module".

System

Various settings can be made in the System section.

- Keyboard layout:
  - Settings in this menu for keyboard layout have no effect.
  - The language for the keyboard layout can be adjusted on the Pixavi Phone.
  - Set the language there and the data will be automatically converted to the appropriate keyboard layout.
- Timeouts
- Picklist mode
- Trigger mode e.g. Coninous Barcode read
- Transfer Barcode ID On/Off
- PDF Prioritization
- other

Beeper (signal tone)

Settings in this menu for the beeper have no effect.

- The volume for the beeper can be adjusted on the Pixavi Phone.
- The beeper volume cannot be changed.

OCR (Optical Character Recognition)

OCR character recognition is not supported.

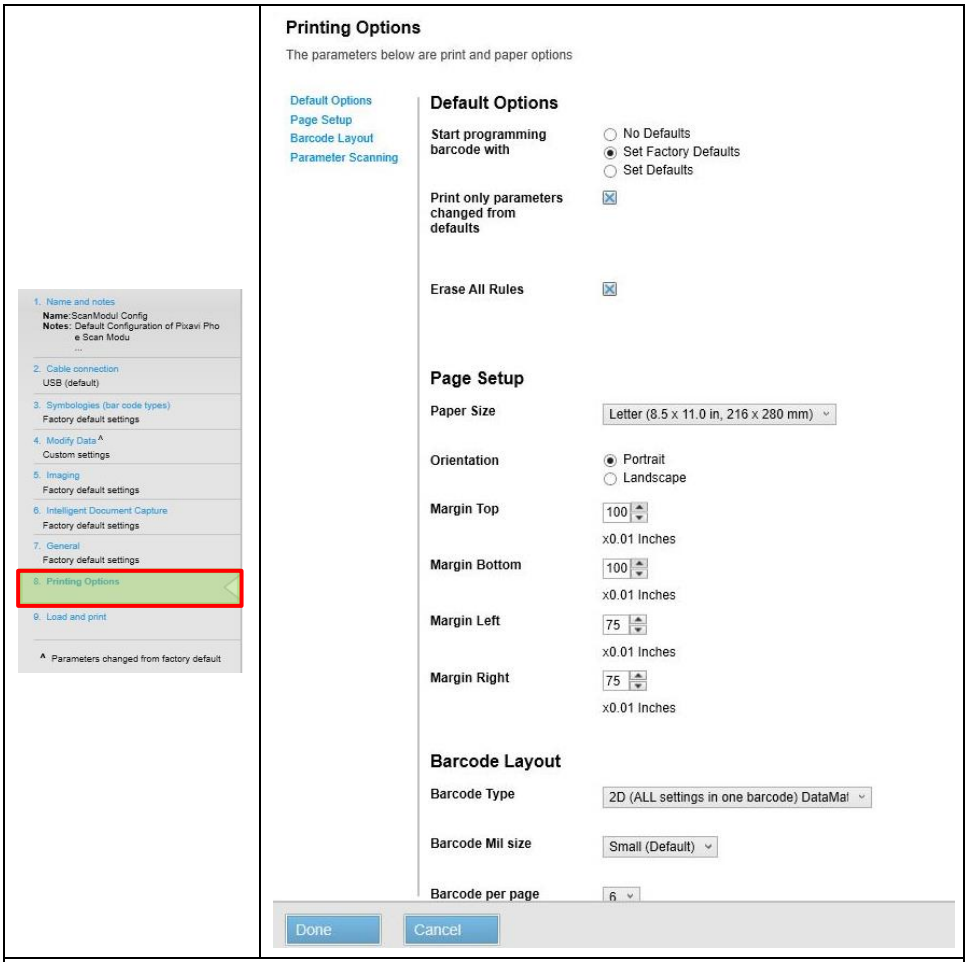
Settings here have no effect.

However, it is recommended to leave all OCR character sets disabled.

Statistics

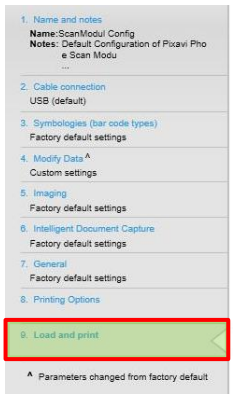
The function is not available.

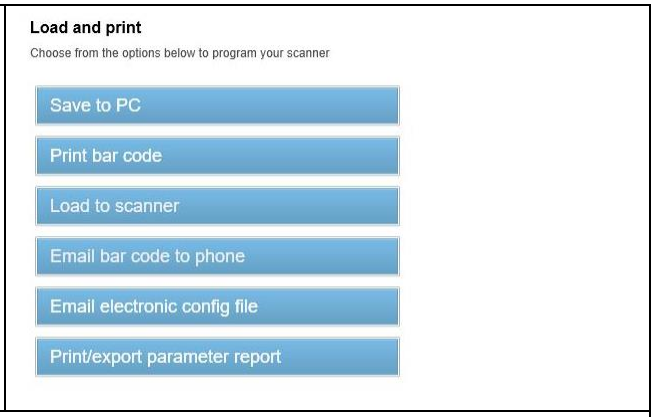
5.3.8 Menu “Printing Options“



In the menu for printing you can define the page layout and the display of the programmable codes.

5.3.9 Menu “Load and print“





The following functions are available in the "Load and print" menu:

- **Save to PC** = Save your configuration file locally on the PC.
- **Print bar code** = Print your configuration as a programmable code for scanning.
- **Email bar code to phone** = You can send your configuration as a programmable code by email.
- **Print/export parameter report** = Creates a report with all parameter changes made. Can be saved or sent.

The other functions are not available because the Pixavi Phone with Scan Module cannot be connected to the PC via USB.

Uploading the configuration as an electronic file via an MDM/EMM system such as Soti, Airwatch or others is not supported.

The configuration can only be transferred to the Scan Module by scanning the programmable codes.

5.4 Transferring the configuration to the Scan Module

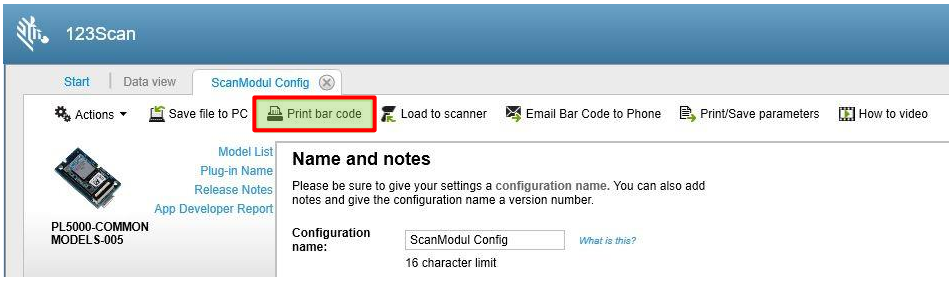
The configuration can only be transferred to the Scan Module by scanning the programmable codes.

- Scan a barcode on paper.
- Scan a barcode from a PC screen.
- Scan a barcode from a smartphone screen.

Uploading the configuration as an electronic file via USB or an MDM/EMM system such as Soti, Airwatch or others is not supported.

You can create the programmable codes directly from the configuration menu.

Select "**Print bar code**" from the menu.

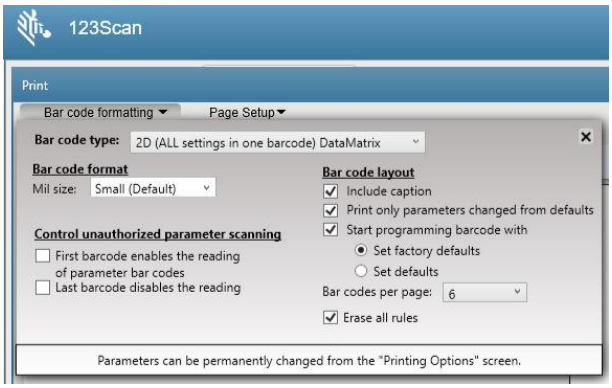


In the menu, the configuration is displayed as a programmable code.

Depending on the scope of the adjustments made, the programming can consist of one or more barcodes.

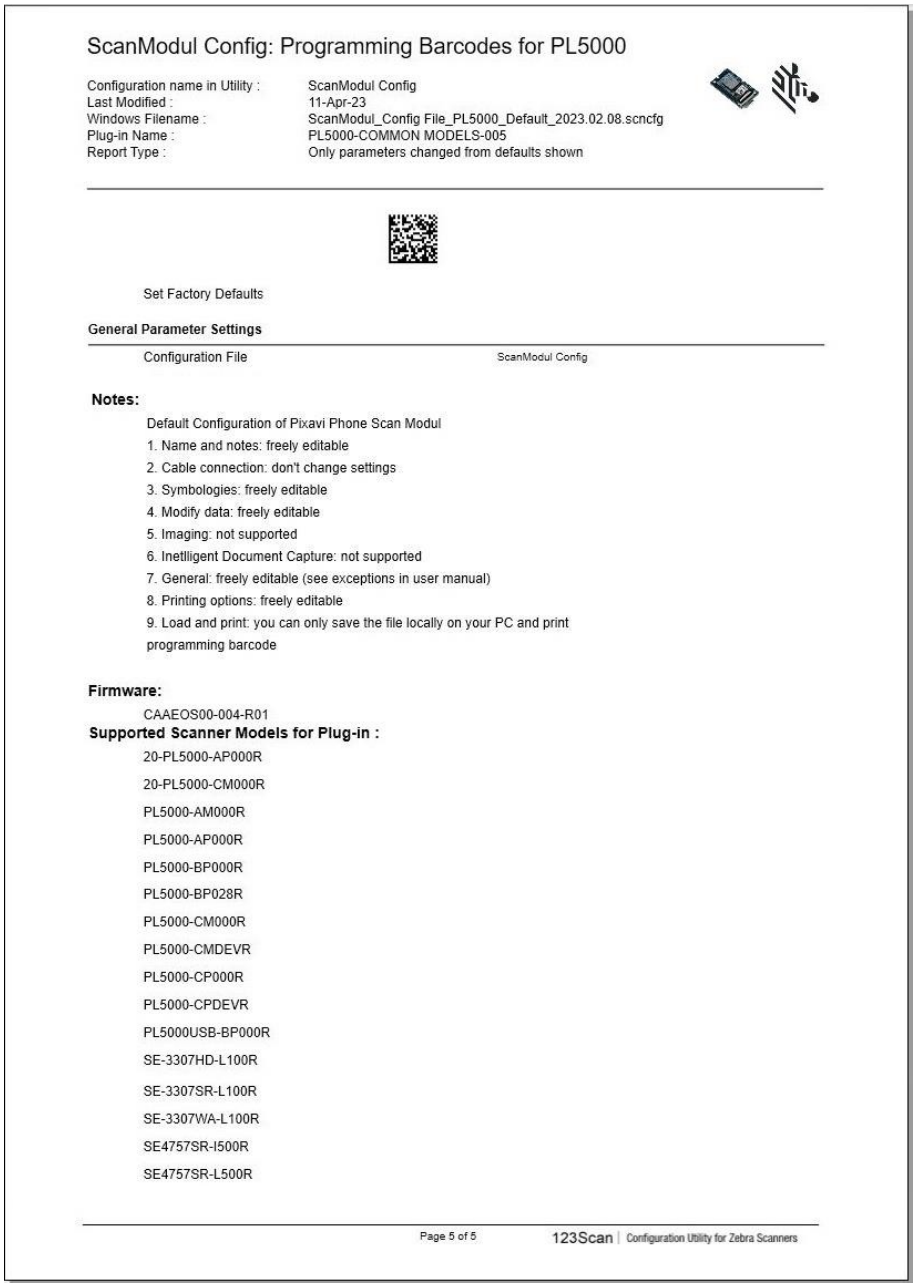
You can freely adapt the expression of the programmable codes.

- Programming code Type
- Size in "mil"
- Barcode layout
- Programming barcodes showing only the changed parameters or all parameters
- Start programming with or without "Factory Default" values
- Other settings



Example:

No parameters are changed, but the settings are reset to factory default.



ScanModul Config: Programming Barcodes for PL5000

Configuration name in Utility :	ScanModul Config
Last Modified :	11-Apr-23
Windows Filename :	ScanModul_Config File_PL5000_Default_2023.02.08.scncfg
Plug-in Name :	PL5000-COMMON MODELS-005
Report Type :	Only parameters changed from defaults shown

Set Factory Defaults

General Parameter Settings

Configuration File — ScanModul Config

Notes:

Default Configuration of Pixavi Phone Scan Modul
1. Name and notes: freely editable
2. Cable connection: don't change settings
3. Symbologies: freely editable
4. Modify data: freely editable
5. Imaging: not supported
6. Inetlligent Document Capture: not supported
7. General: freely editable (see exceptions in user manual)
8. Printing options: freely editable
9. Load and print: you can only save the file locally on your PC and print programming barcode

Firmware:

CAAEOS00-004-R01

Supported Scanner Models for Plug-in :

20-PL5000-AP000R
20-PL5000-CM000R
PL5000-AM000R
PL5000-AP000R
PL5000-BP000R
PL5000-BP028R
PL5000-CM000R
PL5000-CMDEVR
PL5000-CP000R
PL5000-CPDEVR
PL5000USB-BP000R
SE-3307HD-L100R
SE-3307SR-L100R
SE-3307WA-L100R
SE4757SR-I500R
SE4757SR-L500R

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No signal tone sounds when scanning the programmable codes.

You can only tell whether the barcode has been scanned by the scanning beam.

- If the scanning beam remains on until the set timeout, no programmable code has been scanned.
  Default setting: Timeout = 9.9 seconds
- If the scanning beam goes out during the scanning process, the programmable code was captured.

Test your configuration on one device before transferring it to other devices.

6 Special functions

6.1 Picklist Mode

"Picklist Mode" with multiple barcodes

In "Picklist Mode", the scan engine only decodes barcodes that are aligned under the laser crosshair or LED aiming point. It allows the user to select and scan a single barcode from an array of barcodes.

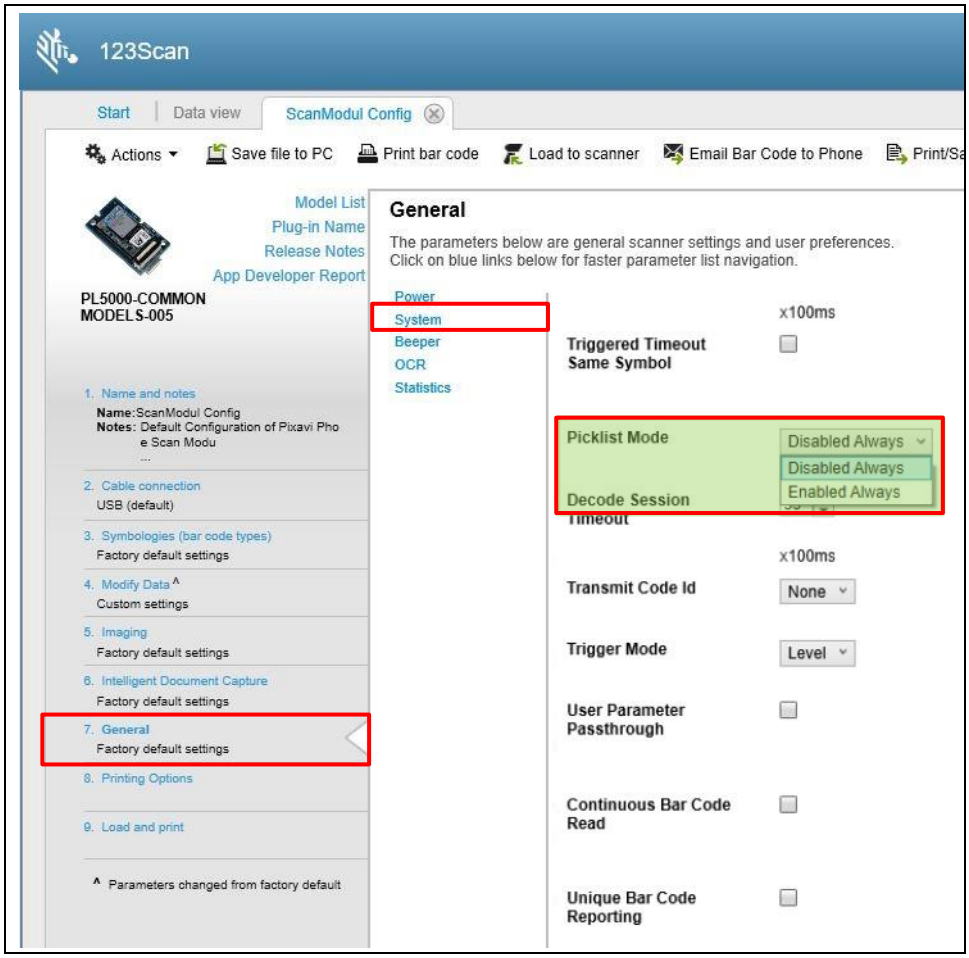
	
The barcode on which the laser crosshair or the LED aiming point is aligned is read.	No barcode is read

The settings can be customized in the menu "**7. General**".

The picklist mode can be set as follows:

- **Disabled Always (factory default setting)** = always disabled (the barcode that was first recognized by the optical detection is read. Disadvantage a specific selection from several barcodes is very difficult or not possible)

- **Enabled Always**


123Scan
Start
Data view
ScanModul Config
Actions
Save file to PC
Print bar code
Load to scanner
Email Bar Code to Phone
Model List
Plug-in Name
Release Notes
App Developer Report
PL5000-COMMON
MODEL S-005
1. Name and notes
Name: ScanModul Config
Notes: Default Configuration of Pixavi Pho
e Scan Modu
2. Cable connection
USB (default)
3. Symbologies (bar code types)
Factory default settings
4. Modify Data ^
Custom settings
5. Imaging
Factory default settings
6. Intelligent Document Capture
Factory default settings
7. General
Factory default settings
8. Printing Options
9. Load and print
^ Parameters changed from factory default
General
The parameters below are general scanner settings and user preferences.
Click on blue links below for faster parameter list navigation.
Power
System
Beeper
OCR
Statistics
x100ms
Triggered Timeout
Same Symbol
Picklist Mode
Disabled Always
Disabled Always
Enabled Always
Decode Session
Timeout
x100ms
Transmit Code Id
None
Trigger Mode
Level
User Parameter
Passthrough
Continuous Bar Code
Read
Unique Bar Code
Reporting

6.2 Barcodes - Inverted (Inverse) or Mirror Image.

An inverted barcode is printed with white lines on a black background.

It is therefore the inverse of a normal black-on-white barcode.

Not every laser scanner is capable of reading inverted barcodes.

The SE55 can read all common inverted versions either in the default setting (e.g. Datamatrix) or by adjusting the settings.

Example:

Standard Barcode - Code 128 Black lines on white background	Inverse barcode - Code 128 White lines on black background
	

Setting options:

The following settings are not available for all barcode types/families. The settings are only available for certain barcode types/families.

Inverted (inverse) barcodes:

- Regular - reads only the standard barcode version
- Inverse only - reads only the inverted barcode version
- Inverse Autodetect - automatically detects and reads whether it is a standard or an inverted barcode

Mirror image barcodes:

- Never - never read
- Always - always read
- Auto Discriminate - automatic discrimination/recognition

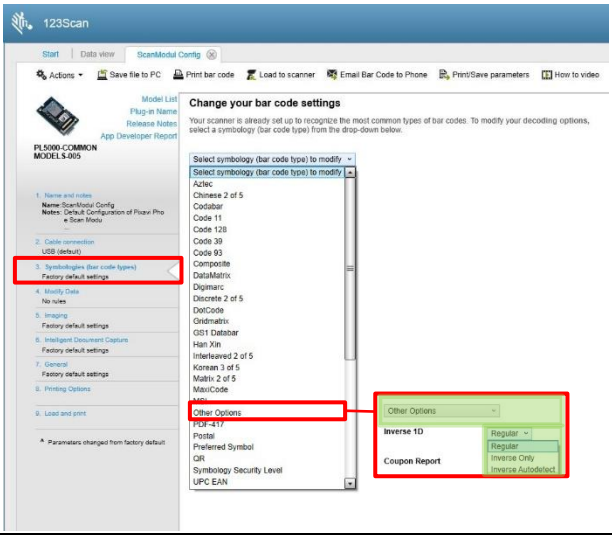
Where can I make the settings?

In the menu "**3. Symbologies (bar codes)**" the settings can be made.

There are two options for setting inverted (inverse) bar codes.

Option 1:

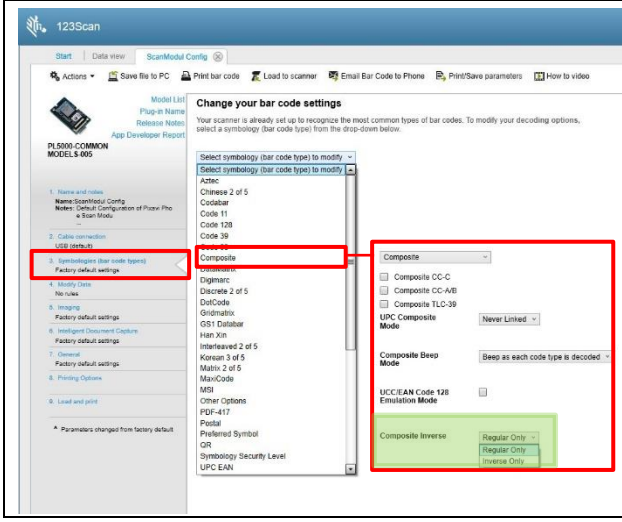
In the "Other Options" menu for 1D barcodes



Option 2:

In the barcode types/families itself.

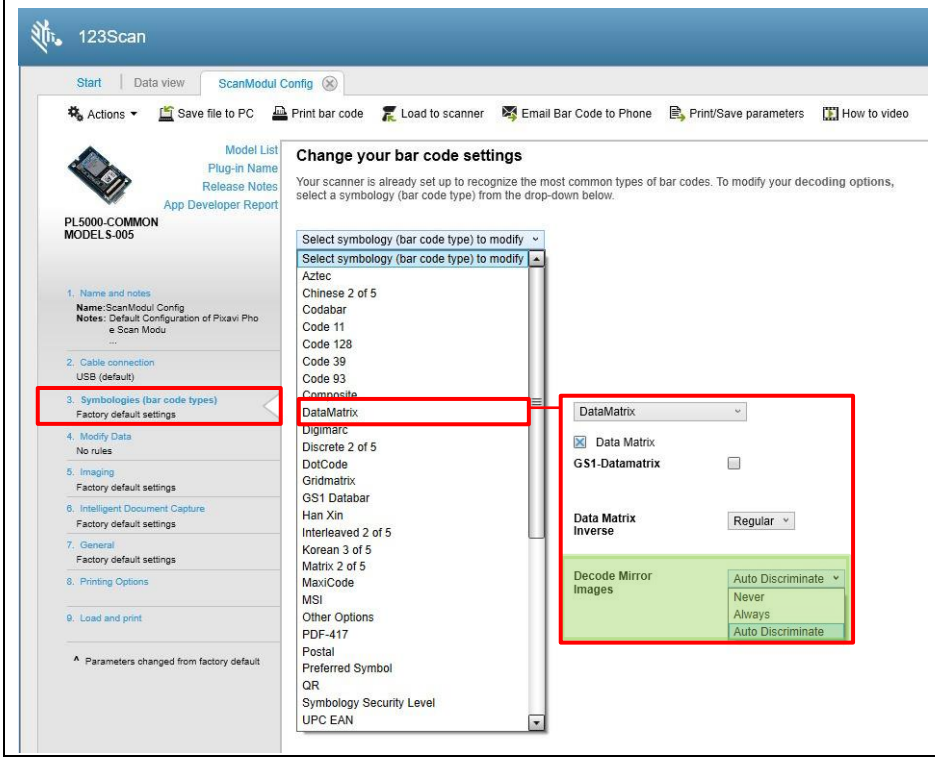
e.g. Aztec, Composite Barcodes, Datamatrix, DotCode, Gridmatrix, Han Xin



There is an option for setting mirror image barcodes.

Option:

Automatic discrimination (Auto Discriminate) can be set on the barcode type/family itself.
e.g. Code 128-ISBT, Datamatrix, Gridmatrix, Australian Post



6.3 Prefix/Suffix

You can append a prefix and/or one or two suffixes to scan data for use in data editing. To set a value for a prefix or suffix, scan one of the following barcodes, and then scan four barcodes from Numeric Barcodes that correspond to that value. See the table “ASCII Character Sets“ for the four-digit codes.

Explanation:

X1234567890YZ

- X = Prefix
- 1234567890 = Barcode data
- Y = Suffix 1
- Z = Suffix 2

When using host commands to set the prefix or suffix, set the key category parameter to 1, and then set the 3-digit decimal value.

See ASCII Character Sets for the four-digit codes.

In default no prefix or suffix value is set. To correct an error or change a selection, scan Cancel.

The most common way for Prefix/Suffix programming is the use of 123 Scan Utility.

Use the menu “**4. Modify Data**”.

Steps:

1. Select in the table “**ASCII Character Sets**“ the four-digit code that you require for you prefix and/or suffix.
2. Scan the “**Scan Data Transmission Format**“ that you require.
3. Scan the barcode for the Prefix or Suffix 1 or Suffix 2 that you program in the next step.
   See “**Set values for the prefix and/or suffix**”.
4. Scan with the
5. the 4-digit ASCII code.
6. Go to step 3 if you need to program next Prefix or Suffix value.
7. Programming is finished after last programmed 4-digit ASCII code.

Note:

To correct an error or change a selection, scan "**Cancel**".

Cancel

6.3.1 Scan Data Transmission Format

If using this parameter do not use ADF rules to set the prefix/suffix.

To change the scan data format, scan one of the following barcodes corresponding to the desired format. Then go set values for the prefix and/or suffix.

In default all data are send as it is.
No prefix or suffix is set.

***Data As Is**
(0)

<DATA> <SUFFIX 1>
(1)

<DATA> <SUFFIX 2>
(2)

<DATA> <SUFFIX 1> <SUFFIX 2>
(3)

<PREFIX> <DATA >
(4)

<PREFIX> <DATA> <SUFFIX 1>
(5)

<PREFIX> <DATA> <SUFFIX 2>
(6)

<PREFIX> <DATA> <SUFFIX 1> <SUFFIX 2>
(7)

6.3.2 Set values for the prefix and/or suffix

Scan the barcode for the prefix or suffix that you program.

Scan "**Data Format Cancel**" if you correct a selection.

Scan Prefix
(7)

Scan Suffix 1
(6)

Scan Suffix 2
(8)

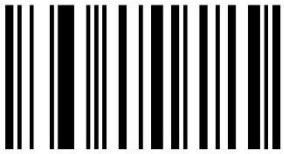
Data Format Cancel

6.3.3 Numeric Barcodes

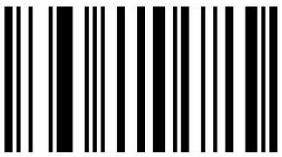
Scan the numeric barcodes to program a 4-digit ASCII code. e.g.

- 1035 as <#>
- 7013 as <CR><LF> (Enter key)

0



1



2

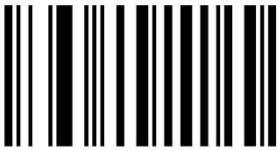
3

4

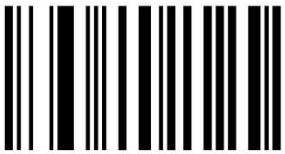
5

6

7



8



9

6.3.4 ASCII Character Sets

Table – ASCII Character Sets

ASCII Character Set		
ASCII Value (Prefix/Suffix-Value)	**Full ASCII-Code 39 Encode Char**	**Keystroke**
1000	%U	CTRL 2
1001	$A	CTRL A
1002	$B	CTRL B
1003	$C	CTRL C
1004	$D	CTRL D
1005	$E	CTRL E
1006	$F	CTRL F
1007	$G	CTRL G
1008	$H	CTRL H
1009	$I	CTRL I
1010	$J	CTRL J
1011	$K	CTRL K
1012	$L	CTRL L
1013	$M	CTRL M/**ENTER**[1]
1014	$N	CTRL N
1015	$O	CTRL O
1016	$P	CTRL P
1017	$Q	CTRL Q
1018	$R	CTRL R
1019	$S	CTRL S
1020	$T	CTRL T
1021	$U	CTRL U
1022	$V	CTRL V
1023	$W	CTRL W
1024	$X	CTRL X
1025	$Y	CTRL Y
1026	$Z	CTRL Z
1027	%A	CTRL [
1028	%B	CTRL \
1029	%C	CTRL]
1030	%D	CTRL 6
1031	%E	CTRL -
1032	Space	Space
1033	/A	!
1035	/C	#

ASCII Character Set		
ASCII Value (Prefix/Suffix-Value)	Full ASCII-Code 39 Encode Char	Keystroke
1036	/D	$
1037	/E	%
1038	/F	&
1039	/G	‘
1040	/H	(
1041	/I	)
1042	/J	*
1043	/K	+
1044	/L	,
1045	-	-
1046	.	.
1047	/o	/
1048	0	0
1049	1	1
1050	2	2
1051	3	3
1052	4	4
1053	5	5
1054	6	6
1055	7	7
1056	8	8
1057	9	9
1058	/Z	:
1059	%F	;
1060	%G	<
1061	%H	=
1062	%I	>
1063	%J	?
1064	%V	@
1065	A	A
1066	B	B
1067	C	C
1068	D	D
1069	E	E
1070	F	F
1071	G	G
1072	H	H
1073	I	I
1074	J	J

ASCII Character Set		
ASCII Value (Prefix/Suffix-Value)	Full ASCII-Code 39 Encode Char	Keystroke
1075	K	K
1076	L	L
1077	M	M
1078	N	N
1079	O	O
1080	P	P
1081	Q	Q
1082	R	R
1083	S	S
1084	T	T
1085	U	U
1086	V	V
1087	W	W
1088	X	X
1089	Y	Y
1090	Z	Z
1091	%K	[
1092	%L	\
1093	%M	]
1094	%N	^
1095	%O	_
1096	%W	‘
1097	+A	a
1098	+B	b
1099	+C	c
1100	+D	d
1101	+E	e
1102	+F	f
1103	+G	g
1104	+H	h
1105	+I	i
1106	+J	j
1107	+K	k
1108	+L	l
1109	+M	m
1110	+N	n
1111	+O	o
1112	+P	p
1113	+Q	q

ASCII Character Set		
ASCII Value (Prefix/Suffix-Value)	**Full ASCII-Code 39 Encode Char**	**Keystroke**
1114	+R	r
1115	+S	s
1116	+T	t
1117	+U	u
1118	+V	v
1119	+W	w
1120	+X	x
1121	+Y	y
1122	+Z	z
1123	%P	{
1124	%Q	|
1125	%R	}
1126	%S	~

Note[1]: The keystroke in bold transmits only if you enabled Function Key Mapping. Otherwise, the unbold keystroke transmits.

Table - Extended Keypad Character Set

Extended Keypad	Keystroke
7013	Enter

6.3.5 Prefix/Suffix - Example:

- Add Prefix "**#**" => ASCII code "1035"
- Send Data of Barcode. (It works with every barcode that is activated)
- Add Suffix "**Enter**" => Extended key code "7013"

Steps:

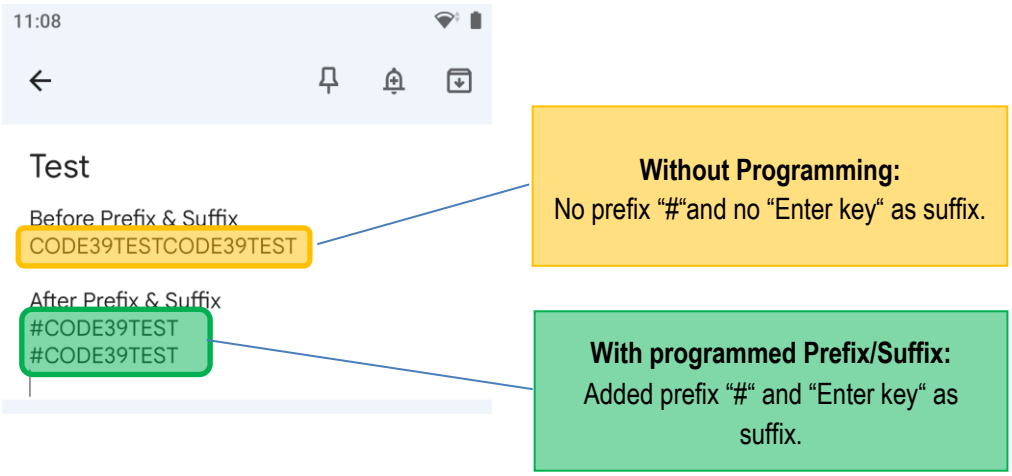
Step 1:	 <PREFIX> <DATA> <SUFFIX (5)	
Step 2:		 Scan Prefix (7)
Step 3:	 1	
		 0
	 3	
		 5
Step 4:	 Scan Suffix 1 (6)	

Step 5:		7
	0	
		1
	3	
Finished		

Test on Pixavi Phone – App Notes:

Test Code 39

CODE39TEST



7 Reset and lock of the Scan Module

7.1 Standard User Preferences

Default Parameters

Scan one of the following barcodes to reset the decoder to its default settings as follows:

- **Restore Defaults** resets all default parameters as follows:
  - If you configured custom default parameter values via the Write to Custom Defaults barcode, scanning the Restore Defaults barcode restores these custom values.
  - If you did not configure custom default parameter values, scanning the Restore Defaults barcode restores the factory default values.
- **Set Factory Defaults** clears all custom default values and sets the factory default values.

Write to Custom Defaults

To create a set of custom defaults, select the desired parameter values in the 123 Scan Utility, and then scan "Write to Custom Defaults" barcode.

***Restore Defaults**	
	Set Factory Default
Write to Custom Defaults	

7.2 Enable/disable parameter barcode scanning

Scan one of the following barcodes to select whether to enable or disable the decoding of parameter barcodes, including the "**Default**" barcodes.

Enable Parameter Scanning (set on default)	
	Disable Parameter Scanning

This function can be used to prevent the scan engine from capturing programming barcodes.

The only exception is the parameter barcode for enabling the parameter scanning again.

However, the scan engine continues to capture all standard barcode types that have been activated for decoding.

Note on the setting in the Zebra 123 Scan Utility:

After creating a configuration, programmable barcodes can be printed out.

Please note the following to avoid inadvertently deactivating the capture of the programming barcodes.

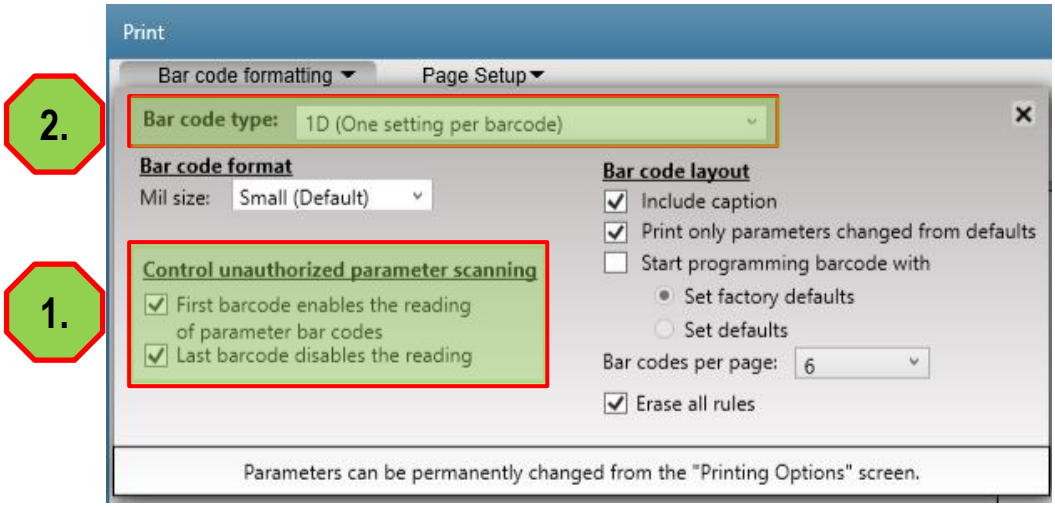
Specific settings can be made in the print menu.

In the marked area (marking 1.) for "**Control unauthorized parameter scanning**", the capture of the parameter barcodes can be set by ticking the checkbox.

If the function is activated there, the programmable barcodes should not be printed as 2D-barcodes.

It is recommended to select 1D-barcodes (marking 2.) as shown in the following image so that the programming barcodes are listed individually.

The function cannot be activated via scan of a 2D-barcode.



By selecting 1D-programming barcodes, the parameter barcodes for Enable/Disable are generated individually.
By scanning the "**Enable Parameter Scanning**" barcode is the capture of the programming barcodes reactivated.

Parameter scan: Programming Barcodes for PL5000

Configuration name in Utility :	Parameter scan
Last Modified :	13-Dez-23
Windows Filename :	Config File_PL5000_Parameter scan_2023.12.13.scncfg
Plug-in Name :	PL5000-COMMON MODELS-006

Instructions: Scan barcodes in order, starting with programming barcode 1.

1/3. Enable Parameter Scanning

General Parameter Settings

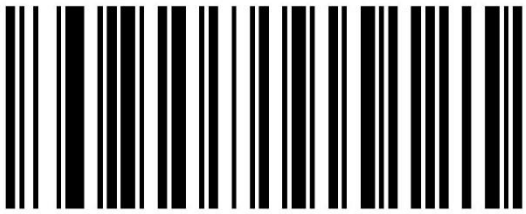
2/3. Configuration File Parameter scan

3/3. Disable Parameter Scanning

7.3 Read out software version

The currently installed firmware version can be read out with the help of the following barcode. 1.

1. open a text program e.g. notes
2. scan the following barcode



Report Software Version

3. note the displayed firmware version e.g. PAAEOS00-004-R01

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04/2023-EN