Advanced Barcode Scanner, Corded



Manual

DA-81006

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1. Introduction

The Advanced Barcode Scanner is the ideal solution for all work areas where reliability, speed and ease of use are crucial. Equipped with modern 2D scanning technology, the device captures both classic 1D barcodes and modern 2D codes quickly and accurately - Regardless of whether they are labels, documents or digital codes on displays. Thanks to the high scanning performance of up to 300 scans per second, even large scan volumes can be handled efficiently. The highly visible green aiming cross in combination with the white illumination light ensures intuitive alignment and reduces misalignments in daily use. The generous scanning angle enables convenient scanning from almost any position without interrupting the workflow. The Advanced Barcode Scanner impresses with its versatility and adapts flexibly to different working environments. Different scanning modes - Manual, continuous and automatic recognition mode - Allow optimal adaptation to individual processes. The broad support of common barcode standards makes the scanner a future-proof solution for a wide range of applications, from administration and logistics to medical areas. Several interfaces are available for uncomplicated integration into existing systems. In USB-HID mode, the scanner is ready for immediate use and works without additional driver installation. This makes it ideal for quick rollouts at multiple workstations. The supplied scanner holder also supports stationary operation, for example at cash registers, workstations or laboratory tables. The Advanced Barcode Scanner also impresses in continuous daily use thanks to its ergonomic design and low weight. Robust housing can be disinfected and is designed for use in medical and hygienically sensitive environments. The smooth surface enables quick and easy cleaning during everyday work. With an IP52 protection rating, the scanner is also protected against dust and dripping water, making it ideally equipped for everyday professional use.

2. Features

- Precise scanning of 1D & 2D barcodes (barcodes / QR codes)
- High scan reliability: Very low error rate of < 1: 5,000,000 for reliable identification in critical work processes.
- Generous scanning angle: ±360° rotation angle and ±65° tilt and declination angle for flexible scanning from almost any position.
- High-resolution image sensor: CMOS sensor with 1280 × 1024 pixels ensures precise detection of fine and dense barcodes.
- Broad code support: All relevant 1D and 2D codes including GS1 Data Bar, Data Matrix (ECC200) and QR Code.
- Flexible system integration: USB-HID, USB-COM and RS232 enable simple connection to modern and existing systems.
- Plug and Play - No additional drivers required
- Healthcare-suitable, disinfectable housing

- IP52 protection class: Dust-protected and protected against dripping water
- Ergonomic & lightweight: Compact design weighing just 171.6 g for fatigue-free operation at high scanning frequencies.

3. Package Content

- 1 x Advanced Barcode Scanner, Corded
- 1 x Supply cable 2m (USB-A - RJ45)
- 1 x Scanner holder
- 1 x QIG

4. Specification

Scan technology:	2D area imager
Light source:	White illumination light, green target cross
Image sensor:	CMOS 1280 x 1024 pixels
Scan angle:	Rotation angle ±360°, inclination angle ±65°, declination angle ±65°
Reading accuracy / error rate:	< 1: 5,000,000
Number of scans per second:	300 scans
Antibacterial and disinfectable housing:	Suitable for medical and healthcare applications: The material of the housing and trigger is tested for anti-bacterial qualities under the standard GB 21551.2-2010 against Staphylococcus Aureus and Escherichia Coli.
Reading distance:	EAN 13: 55mm-400mm(13mil) Code39: 50mm-230mm(5mil) QR Code: 75mm-270mm(15mil) Code 128: 65mm-220mm(5mil)
Supported codes:	1D: Codabar, Code39, Code32 Pharmaceutical (PARAF)., Interleaved 2 of 5, NEC 2 of 5, Code 93, Straight 2 of 5Industial, Straight 2 of 5 IATA, Matrix 2 of 5, Code 11, Code128, GS1-128, UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-13, MSI, GS1 DataBar Omnidirectional, GS1 DataBarLimited, GS1 DataBar Expanded.
	2D: Codeblock A, Codeblock F, PDF417, Micro PDF417, GS1 Composite Codes, QR Code, Data Matrix, MaxiCode.Aztec, HANXIN.
Interface:	USB-HID, USB-COM, RS232

Scan modes:	Manual mode, Continuous mode, Automatic detection mode
driver installation	Plug & Play, no driver installation required (USB-HID)
Accessories	Scanner holder included
Compatible operating systems	Windows / Android / iOS / Mac / Linux
Impact resistance:	Multiple drops from up to 3 m onto concrete
Power consumption:	Operation approx. 225 mA / Standby approx. 124 mA
Operating temperature:	-20 °C to +50 °C
Storage temperature:	-40 °C to +70 °C
IP protection class:	IP52 - Dust-protected / protection against dripping water
Dimensions:	102 x 71 x 177 mm
Weight:	171.6 g
Material:	Plastic
Product color:	White, Petrol
Cable length:	2 m (USB-A - RJ45)
Cable color:	Black

5. General settings

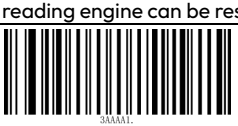
5.1 Read version of information

In order to allow the host to quickly read the version information of the current device, you can confirm it through the "Read version information" setting code.

	
Read version information	

5.2 Factory Default

By scanning the “Factory Default” barcode, all parameters of the reading engine can be restored to the factory configuration.

	
Factory Default	

5.3 URL code switch

Scan the following setting code to enable or disable URL QR code reading

	
Allow reading URL code	*Prohibit reading URL code

5.4 USB HID-KBW

HID-KBW Equipment

When the device is used as a HID device, you can scan the following setup code to select the HID-KBW device class mode

	
*HID-KBW	

Keyboard settings for different countries

In order to allow hosts in various countries to use the device, you can set it up by scanning the "keyboard" code of the corresponding country.

	
*USA	Czech Republic
	
France	Germany/Austria
	
Hungary	Italian
	
Turkey-Q	Turkey-F

5.5 USB -COM

When the scanning engine is connected to the host computer via a USB cable, you can configure the scanning engine to virtual serial port output mode by scanning the following setup code.

	
USB-COM	

6. Scanning mode

6.1 Manual mode

Mode entry

Manual reading mode is the default reading mode. In this mode, the reading engine starts reading the code after the user presses the trigger key, and stops reading the code after the code reading successfully outputs information or the user releases the trigger key (the platform does not support manual mode)

	
*Manual mode	

6.2 Continuous mode

Mode entry

After the settings are completed, the engine will start reading the code immediately without triggering. When the code reading successfully outputs information or the single code reading time ends, the engine will automatically start the next code reading after waiting for a period of time (which can be set). If the following situations do not occur, the engine will work in a loop as above: During the code reading process, the user can also click the trigger button to manually pause the code reading. Clicking the trigger button again will cause the engine to continue the code reading cycle.

	
Continuous mode	

Reading interval time

This parameter refers to the interval between two consecutive scans, that is, after the last scan is completed (regardless of whether the scan is successful or not), the scan engine will not perform any scans within the set interval until the next scan is completed. The setting range of the scan interval is 0~25.5 seconds, with a step length of 0.1 seconds. The default interval is 1.0 seconds.

	
No interval	
	
500ms	*1000ms

	
1500ms	2000ms

Delay time for reading the same barcode

When the same barcode reading delay is enabled, the same barcode reading delay time can be set through the following setting code.

	
No delay	
	
*1000ms	500ms
	
5000ms	3000ms

6.3 Sensing Mode

Mode entry

After the settings are completed, the reading engine immediately starts to monitor the brightness of the surrounding environment without triggering. When the scene changes, the reading engine waits for the set image stabilization time to end before starting to read the code. If the following situations do not occur, the reading engine will work in a cycle as above: If no barcode is scanned within the single reading time, the reading engine will automatically pause reading and enter the monitoring state. In the inductive reading mode, the reading engine can also start reading the code after the user presses the trigger button and continues to monitor the brightness of the surrounding environment when the code reading successfully outputs information or the user releases the trigger button.

	
Sensing Mode	

Sensitivity

Sensitivity refers to the degree of scene change detected in the sensing reading mode. When the reading engine determines that the scene change degree meets the requirements, it will switch from the monitoring state to the reading state.

	
Low	Medium
	
*High	Extra high

Delay time for reading the same barcode

When the same barcode reading delay is enabled, the same barcode reading delay time can be set through the following setting code.

	
No delay	
	
*1000ms	500ms
	
5000ms	3000ms

7. Prompt Output

7.1 Sound Prompt

Scan the following setting code to set the scanner sound.

	
Low	Medium
	
*High	

7.2 All prompt tones

Scan "Enable Mute" to turn off all prompt sounds, and scan "Disable Mute" to cancel the mute setting.

	
Enable Mute	*Disable mute

7.3 Startup sound

Scan "Enable startup sound" to turn on the startup sound. Scan "Disable startup sound" to turn off the startup sound.

	
*Enable startup tone	Disable startup tone

Duration of successful reading prompt tone

Scan “Prompt Tone Duration” to set the duration of the successful reading prompt tone.

	
Long buzzer	*Short beep

7.4 Prefix

Add prefix and suffix instructions

Step 1: Scan the barcode for 'add prefix' or 'add suffix'.

Step 2 Determine the code system to add a prefix or suffix and determine the 2-digit hexadecimal value from the code system chart.

Step 3 Scan the two hexadecimal digits in the appendix chart of this manual, or scan 9,9 for application all code systems.

Step 4 Determine the hexadecimal value of the prefix/suffix from the ASCII conversion table.

Step 5 Scan the two hexadecimal values in the appendix chart of this manual.

Step 6 Repeat steps 4 and 5 for each prefix/suffix character.

Step 7 Scan the 'Save' barcode to exit and save or scan the 'Discard' barcode to exit without saving. Repeat steps 1-6 to add prefixes or suffixes to other code systems.

	
Allow prefix addition	*Prohibit adding prefixes

7.5 Suffix

Add Suffix

Suffixes are user-defined strings that can be added by scanning the “Allow Suffixes” setting code after decoding the message.

	
Suffixes are allowed	*Disable suffixes

7.6 Tail

In order to allow the host to quickly distinguish the current decoding results, you can turn on this function.
Scanning “Modify Terminator Suffix” to enable this function, if the reading is successful, the reading engine will add the corresponding terminator after the decoded data.

	
*CR Modify the terminator suffix to CR	close endpoint
	
Modify the terminator suffix to CRLF	Modify the terminator suffix to TAB

8. Barcode Inversion Setting

In some special scenarios, it is possible to configure the recognition of positive and negative phase barcodes by scanning the following setup codes. If this configuration is turned on, the recognition speed will be affected. Please turn it on in the scenarios where it is required.

	
*Inverted barcodes are not supported	*Supports inverted barcodes

9. Barcode Type Enable/Disable Configuration

9.1 Full Barcode Switch

Scanning the following setup codes will allow or disable reading of all supported barcode types. When all types are disabled, only the setup codes are allowed.

	
Allows reading of all types	Prohibit reading of all types

	
All 1D code system open	All 1D code system closed
	
All QR code systems turned on	All QR code systems closed

9.2 EAN-13

EAN-13 Enabling

Scanning the following setup codes will set the EAN-13 barcode to allow/prohibit reading.

	
*Allow reading EAN-13	Prohibit reading EAM-13

9.3 ISBN

ISBN enable

Scanning the following setup codes will set the ISBN barcode to allow/disallow reading.

	
*Allow reading ISBN	*Prohibit reading ISBN

9.4 EAN-8

EAN-8 Enabling

Scanning the following setup code will set the EAN-8 barcode to allow/prohibit reading.

	
*Allow reading EAN-8	*Prohibit reading EAN-8

9.5 UPC-A

UPC-A Enabling

Scan the following setup codes to set the allow/disallow reading of UPC-A barcodes.

	
*Allow reading UPC-A	Prohibit reading UPC-A

9.6 UPC-E

UPC-E Enable

Scanning the following setting codes will set the UPC-E barcode to allow/prohibit reading.

	
*Allow reading UPC-E	Prohibit reading UPC-E

9.7 Code128

Code128 Enable

Scanning the following setup codes will set up the Code128 barcode allow/prohibit reading.

	
*Allow reading Code128	Prohibit reading Code128

9.8 Code39

Code39 Enabling

Scanning the following setup codes will set the Code39 barcode allow/prohibit reading.

	
*Allow reading Code39	Prohibit reading Code39

Code39 Full ASCII

Enabling Code 39 Full ASCII turns on the ability to read full ASCII characters.

	
*Disable Full ASCII mode	Enable Full ASCII mode

9.9 Code32

Code32 Enable

Scanning the following setup codes will set up the Code32 barcode to allow/prohibit reading.

	
Allow reading Code32	Prohibit reading Code32

9.10 Code93

Code93 Enable

Scanning the following setup codes will set the Code93 barcode to allow/prohibit reading.

	
*Allow reading Code93	Prohibit reading Code93

9.11 CodaBar

CodaBar enable

Scanning the following setting code will set the allow/prohibit reading of CodaBar barcode.

	
*Allow reading CodaBar	Prohibit reading CodaBar

9.12 Interleaved 2 of 5

Interleaved 2 of 5 Enable

Scanning the following setup codes will set the Interleaved 2 of 5 barcode to allow/prohibit reading.

	
Allow reading Interleaved 2 of 5	Interleaved 2 of 5 barcodes allow/prohibit reading.

9.13 Industrial 2 of 5

Industrial 2 of 5 Enable

Scanning the following setup codes will set Industrial 2 of 5 barcodes to allow/prohibit reading.

	
*Prohibit reading Industrial 2 of 5	Allow reading Industrial 2 of 5

9.14 Matrix 2 of 5

Matrix 2 of 5 Enable

Scan the following barcode to allow or prohibit Matrix 2 of 5 barcode reading.

	
Allow reading Matrix 2 of 5	*Prohibit reading Matrix 2 of 5

9.15 Code11

Code11 Enable

Scan the following setting code to set whether to allow or prohibit Code 11 barcode reading.

	
Allow reading Code11	*Prohibit reading Code11

9.16 MSI-Plessey

MSI-Plessey Enable

Scan the following setting code to set whether to allow or prohibit reading MSI-Plessey barcodes.

	
*Prohibit reading MSI	Allow reading MSI

RSS-Limited Enable

Scan the following setting code to set whether to allow or prohibit the reading of limited RSS barcodes.

	
Allow reading restricted RSS	*Prohibit restricted RSS

RSS-Expaned Enable

Scan the following setting code to set whether to allow or prohibit the reading of extended RSS barcodes.

	
Allow reading extended RSS	*Prohibit extended RSS

9.17 Micro QR Code

Micro QR Code Enable

Scan the following setting code to set whether to allow or prohibit Micro QR code reading.

	
Allow to read Micro QR	*Prohibit reading Micro QR

9.18 QR Code

QR Code Enable

Scan the following setting code to set whether to allow or

prohibit QR code reading.

	
Prohibit reading QR	*Allow reading QR

9.19 Data Matrix

DM Code Enable

Scan the following setting code to set whether to allow or prohibit DM barcode reading.

	
*Allow reading DM	Prohibit reading DM

9.20 PDF417

PDF417 Enable

Scan the following setting code to set whether to allow or prohibit PDF417 barcode reading.

	
*Allow reading PDF417	Prohibit reading PDF417

9.21 Micro PDF417

Micro PDF417 Enable

Scan the following setting code to set whether to allow or prohibit the reading of Micro PDF417 barcodes.

	
Allow reading Micro PDF417	Prohibit reading Micro PDF417

9.22 Aztec Code

Aztec Enable

Scan the following setting code to set whether to allow or prohibit the reading of Aztec codes.

	
Allow reading Aztec	Prohibit reading Aztec

9.23 Maxi Code

Maxi Enable

Scan the following setting bar to set whether to allow or prohibit Maxi Code reading.

	
Allow reading Maxi	*Allow reading Maxi

10. Appendix D: ASCII code list

hexadecimal	Decimal	Character
00	0	NUL (Null char.)
01	1	SOH (Start of Header)
02	2	STX (Start of Text)
03	3	ETX (End of Text)
04	4	EOT (End of Transmission)
05	5	ENQ (Enquiry)
06	6	ACK (Acknowledgment)
07	7	BEL (Bell)
08	8	BS (Backspace)
09	9	HT (Horizontal Tab)
0a	10	LF (Line Feed)
0b	11	VT (Vertical Tab)
0c	12	FF (Form Feed)
0d	13	CR (Carriage Return)
0e	14	SO (Shift Out)
0f	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)

1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)
1e	30	RS (Request to Send)
1f	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Left/ Closing Parenthesis)
29	41	) (Right/ Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)

41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left / Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right / Closing Bracket)
5e	94	^ (Caret / Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f

67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	| (Vertical Bar)
7d	125	} (Right/Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)

11. Appendix E: Data Code

0 ~ 9

	
0	1
	
2	3

	
4	5
	
6	7
	
8	9
	
A	B
	
C	D
	
E	F

12. Appendix F: Save or Cancel

After scanning the data code, you need to scan the "Save" setting code to save the scanned data. If you make a mistake when scanning the data code, you can cancel scanning the wrong data.

For example:

- If you scan a certain setting code and scan the data "A", "B", "C", and "D" in sequence, if you scan "Cancel the last read data", the last read digit "D" will be canceled.
- If you scan "Cancel the previous read data", the scanned data "ABCD" will be canceled.
- If you scan "Cancel modification settings", the scanned data "ABCD" will be canceled, and the modification settings will be exited.

	
Save	Cancel

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