Advanced Barcode Scanner, Wireless

Manual

DA-81007

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1. Introduction

The Advanced Barcode Scanner (Wireless) offers maximum freedom of movement for professional working environments. Thanks to modern 2D scanning technology, it reliably captures all common 1D and 2D barcodes, including QR codes as well as pharmaceutical and GS1 standards. This makes it ideal for mobile applications in retail, logistics and the medical sector. Wireless use via 2.4G radio frequency or Bluetooth enables a flexible connection - either via the USB receiver supplied or directly with smartphones, tablets and laptops. With a range of up to 100 meters, the scanner supports efficient workflows without fixed workstations. The integrated offline memory also allows barcodes to be captured even without a permanent connection. Designed for continuous professional use, the scanner impresses with its robust construction and high reliability. The disinfectable housing makes it particularly suitable for hygienically sensitive areas such as pharmacies, laboratories and hospitals. The smooth surface enables quick and easy cleaning during everyday work. The IP52 protection rating protects against dust and dripping water, while the high impact resistance supports a long service life in everyday working life. With its easy commissioning, long battery life and ergonomic design, the Advanced Barcode Scanner (Wireless) is a reliable solution for anyone who wants to combine wireless flexibility and professional scanning performance.

2. Features

- Flexible use via 2.4G RF or Bluetooth - Ideal for mobile and dynamic working environments
- Generous scanning angle: ±360° rotation angle and ±65° tilt and declination angle for flexible scanning from almost any position.
- Up to 100 meters radio range for efficient work without direct line of sight.
- Storage of up to 512,000 characters for uninterrupted work without a permanent connection.
- Support for all relevant 1D and 2D codes including pharmaceutical and GS1 standards
- High-resolution image sensor: CMOS sensor with 1280 × 1024 pixels ensures precise detection of fine and dense barcodes.
- Impact-resistant housing with drop resistance up to 3 m - Designed for daily use.
- Can be connected to smartphones, tablets and laptops without additional hardware
- IP52 protection class: Dust-protected and protected against dripping water
- Also suitable for pharmacies, laboratories, hospitals and mobile healthcare applications

3. Package Content

- 1 x Advanced Barcode Scanner, Wireless
- 1 x Supply cable 1.2m (USB-B - USB-A)
- 1 x 2.4G RF Receiver (USB A)
- 1 x Scanner holder
- 1 x QIG

4. Specification

Scan technology:	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 precision:	≥ 3 mil
Number of scans per second:	300 scans
Reading distance:	Code39(5mil): 50mm-230mm EAN 13(13mil): 55mm-400mm QR Code(15mil): 75mm-270mm Code 128(5mil): 65mm-220mm
Supported codes:	1D: Codabar, Code39, Code32Pharmaceutical (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
Scan modes:	Manual mode, Continuous mode, Automatic detection mode
Wireless communication:	2.4G RF (via USB-A connection) - Bluetooth (direct pairing with mobile devices)
Range:	Range: up to 100 m (free field)
Accessories	Scanner holder included
Compatible operating systems	Windows / Android / iOS / Mac / Linux
Operating voltage:	DC 5 V ±5 %
Battery:	2200 mAh lithium battery - Rechargeable via cable

IP protection class:	IP52 - Dust-protected / protection against dripping water
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.
Impact resistance:	Multiple drops from up to 3 m onto concrete
Dimensions:	102 × 71 × 177 mm
Weight:	224.2g
Material:	Plastic
Product color:	White, Petrol
Cable length (charging):	1,2 m
Cable color:	Black
Wireless Center Frequency:	2.4 GHz Frequency
Band:	2402–2480 MHz
Transmission Rate (Bandwidth):	1 Mbps
Wireless Power Consumption:	Less than 10 mA
SW/HW version:	TX: BT_TX_V1.01_T20251110
	RX: RD_RX_V1.02_20241029

5. Wireless settings

5.1 Pairing setup code

Pair the receiver:

Scan the following two barcodes in sequence. And connect the receiver to computer;

	
2.4G Mode	Connecting devices

Pair Bluetooth devices in HID mode:

Scan the following two barcodes in sequence, turn on the Bluetooth device to search for RB_Scanner_HID connection.

	
HID Mode	Connect

5.2 Mode Selection

	
Instant upload mode	Inventory Mode
	
Over-the-distance storage mode	

5.3 Operations in Inventory Mode

	
Upload all data	Upload new data (that is, data that has not been uploaded before)
	
Display saved data	Showing unuploaded data
	
Clear all data	

5.4 Set the upload data speed delay

	
No delay	Delay 10ms
	
Delay 20ms	

5.5 Set sleep time

X=1yyy (x=1000 means no sleep, sleep time calculation formula: yyy*10=z seconds)

	
No sleep	60 seconds

	
120 seconds	5 minutes
	
10 minutes	

6. General settings

6.1 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	

6.2 Factory Default

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

	
Factory Default	

6.3 URL code switch

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

	
Allow reading URL code	*Prohibit reading URL code

6.4 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. For Poland please use the US layout

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

6.5 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	

7. Scanning mode

7.1 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	

7.2 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

7.3 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

8. Prompt Output

8.1 Sound Prompt

Scan the following setting code to set the scanner sound.

	
Low	Medium
	
*High	

8.2 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

8.3 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

8.4 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

8.5 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

8.6 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	close endpoint

suffix to CR	
	
Modify the terminator suffix to CRLF	Modify the terminator suffix to TAB

9. 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

10. Barcode Type Enable/Disable Configuration

10.1 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

10.2 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

10.3 ISBN

ISBN enable

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

	
*Allow reading ISBN	*Prohibit reading ISBN

10.4 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

10.5 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

10.6 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

10.7 Code128

Code128 Enable

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

	
*Allow reading Code128	Prohibit reading Code128

10.8 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

10.9 Code32

Code32 Enable

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

	
Allow reading Code32	Prohibit reading Code32

10.10 Code93

Code93 Enable

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

	
*Allow reading Code93	Prohibit reading Code93

10.11 CodaBar

CodaBar enable

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

	
*Allow reading CodaBar	Prohibit reading CodaBar

10.12 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.

10.13 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

10.14 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

10.15 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

10.16 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

10.17 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

10.18 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

10.19 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

10.20 PDF417

PDF417 Enable

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

	
*Allow reading PDF417	Prohibit reading PDF417

10.21 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

10.22 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

10.23 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

11. 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)

12. Appendix E: Data Code

0 ~ 9

	
0	1
	
2	3
	
4	5
	
6	7
	

8	9
	
A	B
	
C	D
	
E	F

13. 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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info@assmann.com
ASSMANN Electronic GmbH
Auf dem Schüffel 3
58513 Lüdenscheid
Germany