

User Manual

Stationary 1D/2D Industrial Scanner **HD650-RS232**

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Specifications:

- **Warranty:** 2 years
- **Material:** aluminum housing
- **Scanning method:** automatically (when you bring the code closer)
- **Scan Acknowledgement:** Light and Sound Signal
- **Resolution:** 1280 x 800 px
- **Scan Angle:** Horizontal 46°, Vertical 29°
- **Print Contrast:** >20%
- **Interface:** RS232
- **Power supply:** 5-36 VDC
- **Operating Current:** 300mA ±5% (typical), 450mA ±5% (maximum)
- **Standby Current:** 100mA ±5%
- **Ingress Protection:** IP65
- **Operating temperature:** -20°C - 50°C
- **Storage temperature:** -40°C - 70°C
- **Readable 1D codes:** UPCA, UPCE, EAN 8, EAN 13, Code 128, Code 39, Code 93, Code 32, Code11Codabar, Plessey, MSI, Interleaved 2 of 5, IATA 2 of 5, Matrix 2 of 5, Straight 2 of 5, Pharmacode, RSS-14, RSS-14 Expanded, RSS-14 Limited, Composite, Code-A, Composite Code-B, Composite Code-C
- **Readable 2D codes:** PDF417, Micro PDF 417, Data Matrix, OR, Micro QR, MaxiCode
- **Product dimensions:** 3.6 x 4.3 x 2.4 cm
- **Product weight:** 75 g
- **Package dimensions:** 19 x 10 x 7.2 cm
- **Weight with packaging:** 100 g

Set contents:




- Desktop QR & Barcode Reader
- RS232 cable
- Power supply
- Mounting bracket
- Mounting screws

Key features:

- Blazing-fast scanning of 1D and 2D barcodes, including QR.
- Compact shape and low weight
- Mounting bracket included for mounting the reader anywhere
- RS232 interface
- The robust housing with IP65 protection protects against the ingress of water, dust and dust into the device.
- The scanner is ideal for industrial conditions

Basic control codes




To make changes to the device, scan the "Entering Setting Mode" code before scanning the corresponding setting code, then the setting code, and finally reading the "Exit Setting Mode" code.

 <p>Entering Setup Mode</p>	 <p>Factory reset</p>
 <p>Exiting Setup Mode</p>	




User Custom Settings

 <p>Save custom settings</p>

Code Scan Modes

 <p>Continuous scan mode (default)</p>	 <p>Pulse Scan Triggering (External)</p>
 <p>Auto Scan Mode</p>	

Automatic Sensitivity Measurement Settings




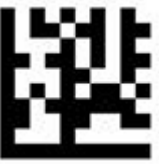
 <p>Low sensitivity level</p>	 <p>Medium sensitivity level (default)</p>
 <p>High sensitivity level</p>	

Repeat barcode reading settings

The reader can be programmed not to read a repeated barcode. In addition, you can set the time for the device to ignore the repeated barcode.

To program this setting, first scan the "Input Setting Mode" code, and then scan the code with the corresponding repeating barcode scan setting. To set the time in which the reader should ignore the scanning of a repeated barcode, you need to additionally scan the "Time setting" code, and then read the appropriate codes from the attachment with numeric codes.

For example, if you want to set the time to 100 ms, read the codes "1", "0" and "0" in sequence, and finally scan the code "Exit setting mode".

 <p>Reading Repeated Barcode at a Specified Time Off (Default)</p>	 <p>Reading Repeating Barcode Enabled</p>
 <p>No reading of repeated last two codes</p>	 <p>Time setting (in milliseconds)</p>

Scan Time Settings

You can set the time for which the scanner will be ready to read the code again in the event of a failed scan. The default is 3000 ms, which can be set from 0 to 3600000, where 0 means continuous decoding until the code is scanned correctly.



To set the decoding time, scan the "Entering setting mode", "Decoding time" codes, and then scan the numeric codes from the attachment at the end of the manual, corresponding to the time you want to set in milliseconds.

For example, if the decoding time is to be 5 seconds, scan the codes "5", "0", "0", "0" and finally the code "Exit setting mode".






Decode time (in milliseconds)





Reset the decode time

 <p>Decoding disabled immediately after successful scan (default)</p>	 <p>Decode time reset to continuously decode barcodes with different content</p>
--	---



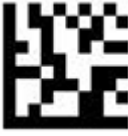
Scan reticle settings

 <p>On all the time (default)</p>	 <p>Triggered during scan</p>
 <p>Disabled</p>	





LED settings

 Enabled during scan (default)	 On all the time
 Fade	 Disabled







Light Signal Brightness Settings

 Low brightness	 Medium brightness
 High brightness (default)	


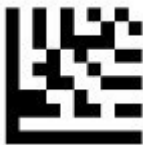


Beep frequency settings

 <p>Minimum 800 Hz</p>	 <p>Low 1,600 Hz</p>
 <p>2730Hz average (default)</p>	 <p>High 4,200 Hz</p>





Serial port baud rate settings

 <p>9600 (default)</p>	 <p>19200</p>
 <p>38400</p>	 <p>57600</p>
 <p>115200</p>	 <p>230400</p>





Prefix settings

 <p>Prefix disabled (default)</p>	 <p>Prefix Enabled</p>
 <p>Prefix setting</p>	 <p>Cancel a set prefix</p>



Suffix setting

 <p>Suffix Off</p>	 <p>Suffix On</p>
 <p>Suffix setting</p>	 <p>Cancel a set suffix</p>

Endpoint settings

 No end sign	 CR
 CR/ LF	 TAB

Case settings (CapsLock)

 CapsLock disabled (default)	 CapsLock On
--	--

Appendix 1. Numeric codes



0



1



2



3



4



5



6



7



8



9

Appendix 2. Barcodes



UPC A



UPC E



EAN 8



EAN 13



Code 128



Code 39



Code 93



Code 32



Code 11



Codabar



Plessey



MSI Plessey



Interleaved 2 of 5



IATA 2 of 5



Matrix 2 of 5



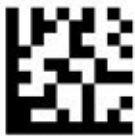
Straight 2 of 5



Pharmacode



GS1 DataBar 14



GS1 DataBar Expanded



GS1 DataBar Limited



GS1 DataBar 14 Stacked



GS1 DataBar Expanded Stacked



Composite Code-A



Composite Code-B



Composite Code-C



PDF417



Micro PDF417



Data Matrix



QR



Micro QR










Aztec











MaxiCode





Appendix 3. ASCII table





HEX	Decimal	ASCII	Function Key Mapping		
			Close	Ctrl Char	Alt+Unicode
00 (NUL)	0	 NUL	Close	Ctrl+@	Alt + 000
01 (SOH)	1	 SOH	Home	Ctrl+A	Alt + 001
02 (STX)	2	 STX	End	Ctrl+B	Alt + 002
03 (ETX)	3	 ETX	Up Arrow	Ctrl+C	Alt + 003





04 (EOT)	4	 EOT	Down Arrow	Ctrl+D	Alt + 004
05 (ENQ)	5	 ENQ	Left Arrow	Ctrl+E	Alt + 005
06 (ACK)	6	 ACK	Right Arrow	Ctrl+F	Alt + 006
07 (BEL)	7	 BEL	Null	Ctrl+G	Alt + 007





08	8	 BS	Backspace	Backspace	Alt + 008
09	9	 TAB	TAB	TAB	Alt + 009
0A (LF)	10	 LF	Null	Ctrl+J	Alt + 010
0B (VT)	11	 VT	Null	Ctrl+K	Alt + 011





0C (FF)	12	 FF	Null	Ctrl+L	Alt + 012
0D (CR)	13	 CR	Enter	Enter	Enter
0E (SO)	14	 SO	Page Up	Ctrl+N	Alt + 014
0F (SI)	15	 SI	Page Down	Ctrl+O	Alt + 015

10 (DLE)	16	 DLE	F11	Ctrl+P	Alt + 016
11 (DC1)	17	 DC1	Null	Ctrl+Q	Alt + 017
12 (DC2)	18	 DC2	Null	Ctrl+R	Alt + 018
13 (DC3)	19	 DC3	Null	Ctrl+S	Alt + 019





14 (DC4)	20	 DC4	Null	Ctrl+T	Alt + 020
15 (NAK)	21	 NAK	F12	Ctrl+U	Alt + 021
16 (SYN)	22	 SYN	F1	Ctrl+V	Alt + 022
17 (ETB)	23	 ETB	F2	Ctrl+W	Alt + 023





18 (CAN)	24	 CAN	F3	Ctrl+X	Alt + 024
19 (CAN)	25	 EM	F4	Ctrl+Y	Alt + 025
1A (SUB)	26	 SUB	F5	Ctrl+Z	Alt + 026
1B (ESC)	27	 ESC	F6	Ctrl+[Alt + 027





1C (FS)	28	 FS	F7	Ctrl+\	Alt + 028
1D (GS)	29	 GS	F8	Ctrl+]	Alt + 029
1E (US)	30	 RS	F9	Ctrl+^	Alt + 030
1F (US)	31	 US	F10	Ctrl+_	Alt + 031





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





24	36	\$	
25	37	%	
26	38	&	
27	39	,	





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





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





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	:	
3B	59	;	





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





40	64	@	
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	[





5C	92	\	
5D	93]	
5E	94	^	
5F	95	-	





60	96	,	
62	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	{	

7C	124		
7D	125	}	
7E	126	~	
7F	127	Delete	

Annex 4. Function keys



Insert



Delete



Home



End



Up Arrow



Down Arrow



Left Arrow



Right Arrow



Shift



ESC



Ctrl



Alt



Page Up



Page Down



F1



F2



F3



F4



F5



F6



F7



F8



F9



F10



F11



F12