User Manual

Stationary 1D/2D Industrial Scanner

HD650-ETH

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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%
- **Supported interfaces:** RS232, USB C, POE, Ethernet
- **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:** 1 kg

Set contents:

- Stationary QR and barcode reader
- RS232 cable
- Power supply
- Mounting bracket
- Mounting screws
- TCP/IP network module

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
- 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
- The included TCP/IP network module gives a wide range of possibilities for connecting various external devices and supports interfaces such as USB C, RS232, POE and Ethernet

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.

 Entering Setup Mode	 Factory reset
 Exiting Setup Mode	

User Custom Settings

 Save custom settings

Code Scan Modes

 Continuous scan mode (default)	 Pulse Scan Triggering (External)
 Auto Scan Mode	

Automatic Sensitivity Measurement Settings

 Low sensitivity level	 Medium sensitivity level (default)
 High sensitivity level	

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".

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

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

 Decoding disabled immediately after successful scan (default)	 Decode time reset to continuously decode barcodes with different content

Scan reticle settings

 On all the time (default)	 Triggered during scan
 Disabled	

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

 Minimum 800 Hz	 Low 1,600 Hz
 2730Hz average (default)	 High 4,200 Hz

Serial port baud rate settings

 9600 (default)	 19200
 38400	 57600
 115200	 230400

Prefix settings

 Prefix disabled (default)	 Prefix Enabled
 Prefix setting	 Cancel a set prefix

Suffix setting

 Suffix Off	 Suffix On
 Suffix setting	 Cancel a set suffix

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