

Wiegand Settings

Quick Overview

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Wiegand Settings

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1. Wiegand Settings

With the release of firmware 6.20.10, Control iD has launched a new feature that allows users to have further control over the Wiegand settings on the iDFace. Now, users can configure the bits format as well as visualize the last information sent/received by a unit.

2. "Configure bits" Screen

Let us go over the different options and talk about what changes can be made in the Wiegand formats.

Wiegand Settings

Wiegand Configure bits Visualization

Automatic ☒ Wiegand size: 17 (110104)

Faculty code

Team: 2 Size: 16

Card number

Team: 16 Size: 16

Even parity

Bit position: 1 Bits to sum: 2,3,4,5,6,7,8,9,10,11,12,13,14,15,1

Odd parity

Bit position: 17 Bits to sum: 10,20,21,22,23,24,25,26,27,28,29

Parity calculation order: 1, 27

Bit visualization

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48

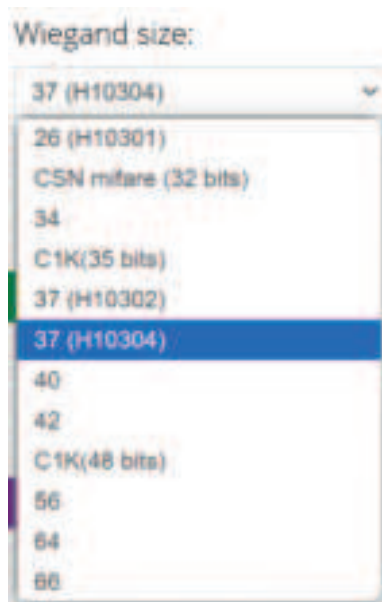
Cancel Save

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2.1 Wiegand size:

In the "Automatic" format, iDFace will display a list of pre-configured Wiegand formats, each with its own unique Facility code, Card number and Parity bits formats. After selecting a desired pre-configured format, a breakdown of the bits will be shown according to the bit order, meaning, which bits will be used for the Facility code, which will be for Card number, and how the Parity bits will be calculated.



2.2 Manual formats

After disabling the "Automatic" formats, you will now have the option to configure the Wiegand format to a desired format, granted it follows certain rules:

- Wiegand size: from 26 to 64 bits
- Parity bits: up to 2 Even parity bits and up to 2 Odd parity bits, choosing which bits will be added for each parity bit. And they must always be at the beginning or end of the Wiegand format, never in the middle.
- Facility code must always be in front of the Card number.
- The sum of Parity bits + Facility code + Card number must not be greater than the total Wiegand size.

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Mode Configuration Diagnostics

Automate Wiegand size: 28

Facility code Start: 2 Size: 3 Invert bit order: ☐

Card number Start: 1 Size: 21 Invert bit order: ☐

Even parity bits: 1 Odd parity bits: 1

Even parity Bit position: 1 Bits to sum: 2,3,4,5,6,7,8,9,10,11,12,13,14

Odd parity Bit position: 25 Bits to sum: 14,15,16,17,18,19,20

Parity calculation order: Default 1,28

Update bits

Bit visualization

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44

Reset Save

2.2.1 Parity bits calculation

The Even parity bit is calculated by adding the number of bits with value "1" in the configured range. If the sum value is even, the Even parity value will be 0, otherwise the value will be 1.

The Odd parity bit is calculated by adding the number of bits with value "1" in the configured range. If the sum value is odd, the Odd parity value will be 0, otherwise the value will be 1.

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3. "Diagnostics" Screen

The "Diagnostics" screen is an easy way to check how the device is interpreting and formatting the data that is receiving/sending.

After a card reading is received over the Wiegand-IN signals at EAM, iDFace will show a detailed description of what bits were read (e.g. what Facility code, Card number and Parity bits were interpreted). It has a similar structure as the "Bit visualization" on the "Configure bits" screen.

The screenshot shows the 'Wiegand Settings' window with the 'Diagnostics' tab selected. It displays the 'Last card read' information, including total bits read, facility code, card number, and a bit visualization grid.

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Mode | Configure bits | **Diagnostics**

Last card read

Total bits read:	Number of bits expected:
37	37
Facility code read:	Card number read:
235	249109
Day and time of last read:	Parities:
08/05/25 - 14:52:35	Check

Bits read:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0	0	0	0	0	0	0	0	1	1	1	0	1	0
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	1	0	1	1	1	1	0	0	1	1	0	1	0	0
31	32	33	34	35	36	37								
0	1	0	1	0	1	1								

Cancel Save

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4. Important

This Wiegand settings will apply to both inbound and outbound information from the iDFace. Meaning that Wiegand IN and Wiegand OUT will behave equally and format the information it receives/sends into the previously configured Wiegand format.