

## HID iCLASS Wiegand Data Format (26-bit)

Wiegand Data (26-bit output from reader)

26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
EP	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
EP	Facility Code (0-255)								Card Number (0-65535)															OP	

EP=Even Parity (bits 14-25) OP=Odd Parity (bits 2-13)

Wiegand Data (27-bit stored value - before encryption)

27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	EP	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
S	EP																									OP

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 26-bit Wiegand Reader Output Example:

Facility Code: 202 (0xCA)

Card Number: 1091 (0x443)

26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	1
EP	Facility Code (0-255)								Card Number (0-65535)															OP	

64-bit Value stored in Block 7 (unencrypted) = 0x0000000005940887

64-bit Value stored in Block 7 (TDES encrypted) = 0x903D777E9DC99708

## HID iCLASS Wiegand Data Format (34-bit H10306)

Wiegand Data (34-bit output from reader)

34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
EP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	EP
EP	Facility Code (0-65535)															Card Number (0-65535)															EP		

EP=Even Parity (bits 18-33) EP=Odd Parity (bits 2-17)

Wiegand Data (35-bit stored value - before encryption)

35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	EP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	EP
S	EP	Facility Code (0-65535)															Card Number (0-65535)															EP		

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 34-bit (H10306) Wiegand Reader Output Example:

Facility Code: 2212 (0x8A4)

Card Number: 13375 (0x343F)

34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1
EP	Facility Code (0-65535)															Card Number (0-65535)															EP		

64-bit Value stored in Block 7 (unencrypted) = 0x000000041148687F

64-bit Value stored in Block 7 (TDES encrypted) = 0xA991F7B5766B82F6

## Honeywell/Northern iCLASS Wiegand Data Format (34-bit N10002)

Wiegand Data (34-bit output from reader)

34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
OP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
OP	Facility Code (0-65535)															Card Number (0-65535)															OP		

OP=Even Parity (bits 18-33) OP=Odd Parity (bits 2-17)

Wiegand Data (35-bit stored value - before encryption)

35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	OP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
S	OP	Facility Code (0-65535)															Card Number (0-65535)															OP		

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 34-bit (N10002) Wiegand Reader Output Example:

Facility Code: 211 (0xD3)

Card Number: 26974 (0x695E)

34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1	1	0	1	0	0	1	0	1	0	1	1	1	1	0	0
OP	Facility Code (0-65535)															Card Number (0-65535)															OP		

64-bit Value stored in Block 7 (unencrypted) = 0x0000000401A6D2BC

64-bit Value stored in Block 7 (TDES encrypted) = 0xA8D0733ABC30569E

## HID iCLASS Wiegand Data Format (35-bit Corporate 1000)

Wiegand Data (35-bit output from reader)

35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
P3	P2	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	P1
P3	P2	Facility Code (0-4095)												Card Number (0-1048575)															P1					

P1=Odd Parity (bits 3,4,6,7,9,10,12,13,15,16,18,19,21,22,24,25,27,28,30,31,33,34) Must be calculated second since it contains P2.

P2=Even Parity (bits 2,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24,26,27,29,30,32,33) Must be calculated first.

P3=Odd Parity (bits 1-34) Must be calculated last since it includes P1 and P2.

Wiegand Data (36-bit stored value - before encryption)

36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
1	P3	P2	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	P1
S	P3	P2	Facility Code (0-4095)												Card Number (0-1048575)															P1						

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 35-bit (Corp 1000) Wiegand Reader Output Example:

Facility Code: 803 (0x323)

Card Number: 43341 (0xA94D)

35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	1	0	1	1
P3	P2	Facility Code (0-4095)												Card Number (0-1048575)															P1					

64-bit Value stored in Block 7 (unencrypted) = 0x0000000C6461529B

64-bit Value stored in Block 7 (TDDES encrypted) = 0x9BCDA854E2E17E0A

## Keyscan iCLASS 36-bit Wiegand Data Format

Wiegand Data (36-bit output from reader)

36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
EP	1	1	1	0	0	0	0	1	0	0	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
EP	Fixed Field = 900 (0x384)										Facility Code (0-255)								Card Number (0-65535)										OP						

EP=Even Parity (bits 19-35) OP=Odd Parity (bits (2-18))

Wiegand Data Format (37-bit code stored in Block 7 - before encryption)

37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	EP	1	1	1	0	0	0	0	1	0	0	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
S	EP	Fixed Field = 900 (0x384)										Facility Code (0-255)								Card Number (0-65535)										OP						

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### Keyscan Wiegand Reader Output Example:

Facility Code: 044 (0x2C)

Card Number: 17528 (0x4478)

36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0	0	1
EP	Fixed Field = 900 (0x384)										Facility Code = 044 (0x2C)								Card Number = 17528 (0x4478)										OP						

64-bit Value stored in Block 7 (unencrypted) = 0x0000001F085888F1

64-bit Value stored in Block 7 (TDES encrypted) = 0xFE9219AA85EEFA6

## HID iCLASS Wiegand Data Format (37-bit H10304)

Wiegand Data (37-bit output from reader)

37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
EP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
EP	Facility Code (0-65535)																Card Number (0-524287)																OP			

EP=Even Parity (bits 19-36) OP=Odd Parity (bits 2-19)

Wiegand Data (38-bit stored value - before encryption)

38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	EP	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
s	EP	Facility Code (0-65535)																Card Number (0-524287)																OP			

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 37-bit (H10304) Wiegand Reader Output Example:

Facility Code: 3212 (0xC8C)

Card Number: 455800 (0x6F478)

37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	0	0	0	1	1	1	1	1	0	0	0	1
EP	Facility Code (0-65535)																Card Number (0-524287)																OP				

64-bit Value stored in Block 7 (unencrypted) = 0x00000030C8CDE8F1

64-bit Value stored in Block 7 (TDES encrypted) = 0xE2421225D3CD8533

## HID iCLASS Wiegand Data Format (37-bit H10302)

Wiegand Data (37-bit output from reader)

37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
EP	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
EP	Card Number (0-34359738366)																											OP								

EP=Even Parity (bits 19-36) OP=Odd Parity (bits 2-19)

Wiegand Data (38-bit stored value - before encryption)

38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	EP	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	OP
S	EP	Card Number (0-34359738366)																											OP								

S= Start Sentinel (=Logic 1)

Note: Start Sentinel bit is stored in card but not transmitted as part of wiegand data stream.

### 37-bit (H10302) Wiegand Reader Output Example:

Facility Code: N/A

Card Number: 81286240 (0x4D85460)

37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	0	0	0	0	1	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0
EP	Card Number (0-34359738366)																											OP									

64-bit Value stored in Block 7 (unencrypted) = 0x0000003009B0A8C0

64-bit Value stored in Block 7 (TDES encrypted) = 0x88B2D9F0EF5392BD