



Acre Multi-tech Reader with Acre Access Control – Wiegand & OSDP Protocol

This document describes the process for connecting the acre multi-tech reader to AAC and AAC Classic, based upon the Wiegand & OSDP protocol. The readers are configured to read the acre supplied LEAF credentials.

1. Reader Detail

The acre multi-tech reader has a built-in auto-detect function, meaning depending on how you wire the reader, it will configure itself accordingly (OSDP / Wiegand)
This guide will show how to setup the reader using Wiegand and OSDP protocol.

The reader will report the mode its in upon power up:

Beep Code	Description
1x Beep, 1x Red LED flash	Wiegand Only
2x Beep, 2x Green LED flash	OSDP Only
4x Beep, 4x Green LED flash	Auto Detect

Note – If a reader has been connected as OSDP, then it will lock itself to this format, and a config token will be required to revert to Auto-detect mode.
See chapter 3.2 for further detail on this.

Note – acre multi-tech readers are 12vdc

2. Wiegand - Wiring a Reader (Mercury)

The reader is wired in the following way:

Reader	Mercury
Red	V0 / 12v
Black	GND / 0v
Green (D0)	Data / D0
White (D1)	Clock / D1
Blue	LED
Yellow	BZR

Note: For MP Panels the EOL Jumper *must be off* for Wiegand operation.

2.1. Keypad Configuration

- Power cycle the reader
- Within 2 minutes after boot enter *88889999
- Within 2 seconds enter
 - *4 → 4 bit format
- In AAC select the corresponding “Keypad Type” → HID 4 format

2.2. Parallel operation: Wiring two readers to one terminal

Two readers can be connected to the same terminal. They will work as if they were the same reader. This can be used for e.g. a high and low reader on a barrier.

3. OSDP - Wiring a Reader (Mercury)

The reader is wired in the following way:

Reader	Mercury
Red	V0 / 12v
Black	GND / 0v
White (D1) RS485A(+)*	Data / D0 RS485A(+)*
Green (D0) RS485A(-)*	Clock / D1 RS485A(-)*
Blue	LED
Yellow	BZR

*D0/RS485A(+) on the reader is D0/RS485A(-) on the Mercury controller, so D1/D0 must be swapped.

Note:

- With OSDP communication the keypad is not configurable at the reader and is controlled through the PACS software.
- For MP Panels the EOL Jumper *must be set*.

3.1. Parallel Operation: Wiring two readers to one terminal

Currently, it is not possible to connect two readers to one terminal using OSDP addressing.

3.2. Switching from OSDP only mode back to Auto Detect

If the reader has previously been connected as an OSDP reader, it will be fixed to OSDP mode, and needs to be “reset” before being usable as a Wiegand reader:

To re-enable Wiegand functionality (OSDP Auto-detect mode), you will need to enter the token via the Configure Mobile App:

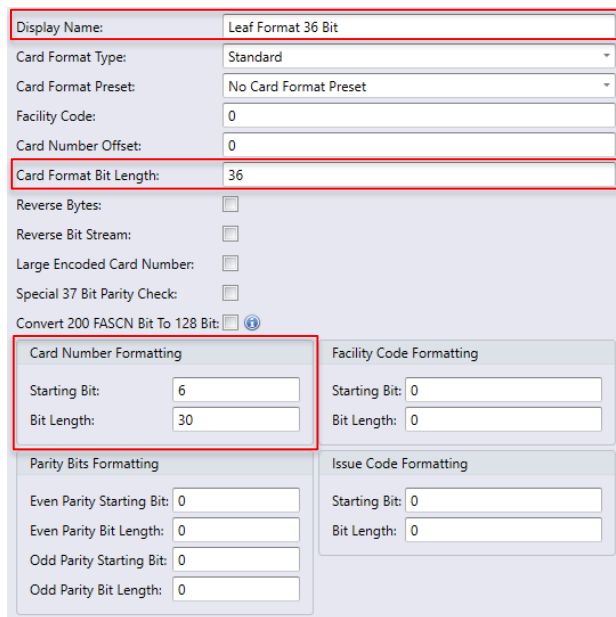
Within the Configure App, navigate to:

- Profiles & Cards → Connect to reader → Download
use Token: **c-ejsQmSnJ**
- Apply to reader

4. Defining Wiegand Card Format

For the number printed on the acre supplied LEAF cards to be read correctly by the software, the following Wiegand format needs to be defined and added to the controller:

AAC Classic: Access Configuration → Card Formats



Display Name: Leaf Format 36 Bit

Card Format Type: Standard

Card Format Preset: No Card Format Preset

Facility Code: 0

Card Number Offset: 0

Card Format Bit Length: 36

Reverse Bytes: ☐

Reverse Bit Stream: ☐

Large Encoded Card Number: ☐

Special 37 Bit Parity Check: ☐

Convert 200 FASCN Bit To 128 Bit: ☐ ⓘ

Card Number Formatting

Starting Bit: 6

Bit Length: 30

Facility Code Formatting

Starting Bit: 0

Bit Length: 0

Parity Bits Formatting

Even Parity Starting Bit: 0

Even Parity Bit Length: 0

Odd Parity Starting Bit: 0

Odd Parity Bit Length: 0

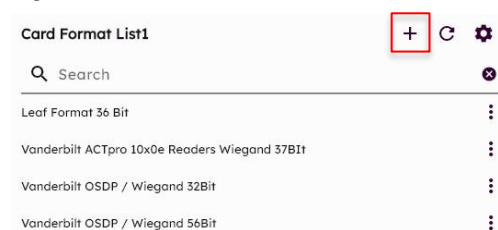
Issue Code Formatting

Starting Bit: 0

Bit Length: 0

AAC:

Option 1: Card Format List Widget



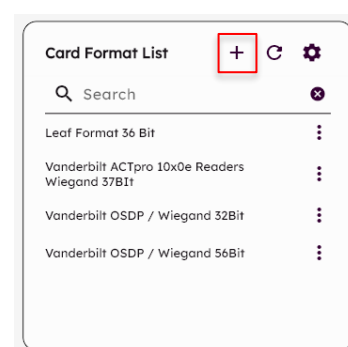
Card Format List1

+ ⌂ ⚙

Search

- Leaf Format 36 Bit
- Vanderbilt ACTpro 10x0e Readers Wiegand 37Bit
- Vanderbilt OSDP / Wiegand 32Bit
- Vanderbilt OSDP / Wiegand 56Bit

Option 2: Card Format List Quick Action

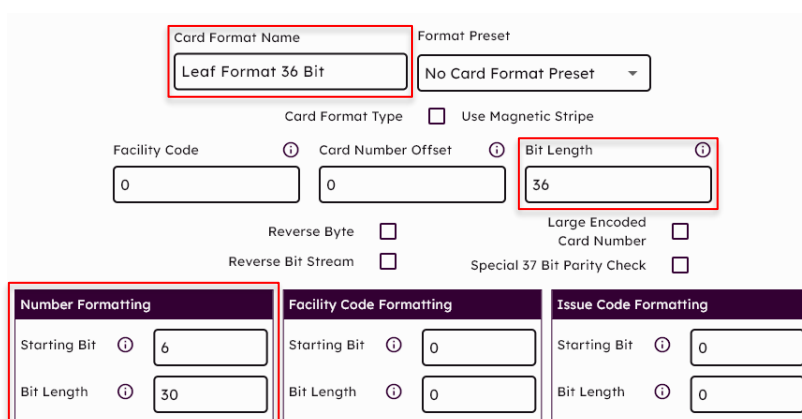


Card Format List

+ ⌂ ⚙

Search

- Leaf Format 36 Bit
- Vanderbilt ACTpro 10x0e Readers Wiegand 37Bit
- Vanderbilt OSDP / Wiegand 32Bit
- Vanderbilt OSDP / Wiegand 56Bit



Card Format Name: Leaf Format 36 Bit

Format Preset: No Card Format Preset

Card Format Type: ☐ Use Magnetic Stripe

Facility Code: 0

Card Number Offset: 0

Bit Length: 36

Reverse Byte: ☐

Reverse Bit Stream: ☐

Large Encoded Card Number: ☐

Special 37 Bit Parity Check: ☐

Number Formatting

Starting Bit: 6

Bit Length: 30

Facility Code Formatting

Starting Bit: 0

Bit Length: 0

Issue Code Formatting

Starting Bit: 0

Bit Length: 0



5. Acre LEAF credentials:

The following acre supplied credentials have been compatibility tested with the acre multi-tech readers and AAC:

Credential Part Number	Description
50D4-AS	LEAF, EV2 4K ISO Card
50D8-AS	LEAF, EV2 8K ISO Card
50H4-AS	LEAF, EV2 8K ISO Card w/ Mag Stripe
50H8-AS	LEAF, EV2 Dual Frequency Prox + 4K ISO Card
51H8-AS	LEAF, EV2 Dual Frequency Prox + 8K ISO Card
60H8-AS	LEAF, EV2 8K Keyfob
50L4-AS	LEAF, EV3 4K ISO Card
50L8-AS	LEAF, EV3 8K ISO Card
AAC-MOBILE-WLT-C	acre Wallet Credential (25 MOQ)
AAC-MOBILE-BLE	acre BLE Credential

SUPPORT INFORMATION



If you have any questions, please contact our Global Technical Services team.
Contact details can be found on our website.