



Acre Multi-Tech Gen 2 Reader with ACTpro – Wiegand & OSDP Protocol

This document describes the process for connecting the acre Multi-Tech Gen 2 reader to ACTpro, based upon the Wiegand & OSDP protocol.

The readers are configured to read ACT encoded Mifare and DESFire credentials.

1. Reader Detail

The acre Multi-Tech Gen 2 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 it's 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.

2. Wiegand - Wiring a Reader

The reader is wired in the following way:

Entry Reader:

Reader	ACTpro 1500e / 100e
Red (5-24vdc)	+12v
Black (0v)	0v
Green (D0)	Data / D0
White (D1)	Clock / D1
Blue (Green LED)	Green
Orange (Red LED)	Red

Exit Reader:

Reader	ACTpro 1500e / 100e
Red (5-24vdc)	+12v
Black (0v)	0v
Green (D0)	Sense
White (D1)	Clock / D1
Blue (Green LED)	Green
Orange (Red LED)	Red

3. OSDP - Wiring a Reader

The reader is wired in the following way:

Reader	ACTpro 1500e
Red (5-24vdc)	+12v
Black (0v)	0v
Green (RS485-A)	OSDP / NET A
White (RS485-B)	OSDP / NET B

With the readers wired, use the OSDP auto-detect function in ACTpro to find the connected readers. Further detail on adding OSDP readers to ACTpro can be found in the ACTpro help function.

3.1. 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 Mobile App, navigate to:

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

4. Defining Card Formats

The reader is configured to read the encoded data from ACT encoded credentials.

4.1. ACT Encoded Credentials

For the number printed on ACT encoded credentials to be read correctly by the software, the relevant card formats must be defined and applied to the controller:

4.1.1 Wiegand Format Definition – ACT Encoded Cards

ACT Install → Card Configuration → Format

Format
MIFARE Format
AUX Card Memory

There are 4 built-in Wiegand card formats. You can add one or more custom format, either from the predefined list, or directly using the data entry fields. Tick "Use this format" to use the additional format. Tick "Check built-in formats" if you want the built-in formats to be used.

Built-in Formats

☐ 32-bit No Parity
☐ HID 26-bit Wiegand
☐ HID 34-bit Wiegand
☐ HID 35-bit Wiegand
☐ HID 37-bit Wiegand
☐ Vanderbilt 56-bit UID

Available Formats

☒ 37-bit no site code
☐ ANPR 26-bit Wiegand
☐ HID 64-bit Wiegand
☐ Vanderbilt 34-bit
☐ ZKTeco Bio
☐ SQ80 - 37 Bit Format
☐ Wavelynx 36 Bit

Add Delete

Wiegand Format

Name: 37-bit no site code

	Start	Length
Overall:		37
Site Code:	0	0
Card Number:	5	32
Issue Number:	0	0

☒ Use this format
☐ Check built-in formats

4.1.2 OSDP Format Definition – ACT Encoded Cards

ACT Install → Card Configuration → Format

Format
MIFARE Format
AUX Card Memory

There are 4 built-in Wiegand card formats. You can add one or more custom format, either from the predefined list, or directly using the data entry fields. Tick "Use this format" to use the additional format. Tick "Check built-in formats" if you want the built-in formats to be used.

Built-in Formats
☐ 32-bit No Parity
☐ HID 26-bit Wiegand
☐ HID 34-bit Wiegand
☐ HID 35-bit Wiegand
☐ HID 37-bit Wiegand
☐ Vanderbilt 56-bit UID

Available Formats
☐ 37-bit no site code
☐ ANPR 26-bit Wiegand
☐ HID 64-bit Wiegand
☐ Vanderbilt 34-bit
☐ ZKTeco Bio
☐ SQ80 - 37 Bit Format
☐ Wavelynx 36 Bit

Add **Delete**

Wiegand Format

Name: 32-bit No Parity

	Start	Length
Overall:		32
Site Code:	0	0
Card Number:	1	32
Issue Number:	0	0

Note: If no other card format is selected, the controller will always default to using one of the “Built-in Formats”

If your system requires card formats for other connected readers, ensure that “Check built-in formats” is selected.



5. Compatible Credentials:

The following acre supplied credentials have been compatibility tested with the acre Multi-Tech Gen 2 readers and ACTpro:

Credential Part Number	Description
MF10C1	MIFARE Classic 1K Cards with number encoded in the memory.
MF10T1	MIFARE Classic 1K Fob with number encoded in the memory.
EV10C1	DESFire EV1 ISO Card with number encoded in the memory.
EV10C3	DESFire EV3 ISO Card with number encoded in the memory

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