ALR-9900/9900+ to ALR-F800/F800-X GPIO Mapping

F800 | F800-X | 9900 | 9900

Overview

Alien fixed readers are designed using ARP (Alien Reader Protocol) which is a syntax and value based communication / configuration language. To that end, the ALR-9900/9900+ and ALR-F800/F800-X reader series share the same optically isolated GPIO circuitry / architecture from a functional and configuration standpoint.
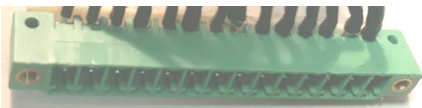
Where they differ are the pinouts for each of the various attributes and other small differences.

This application note will provide a guide to creating an adapter where an existing GPIO setup designed for 9900/9900+ may be used transparently with F800 by virtue of an additional connector and misc. wiring.
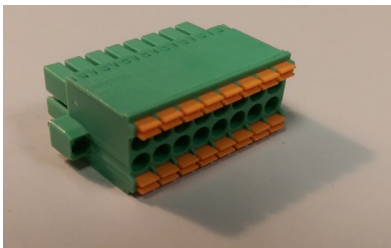
Parts List
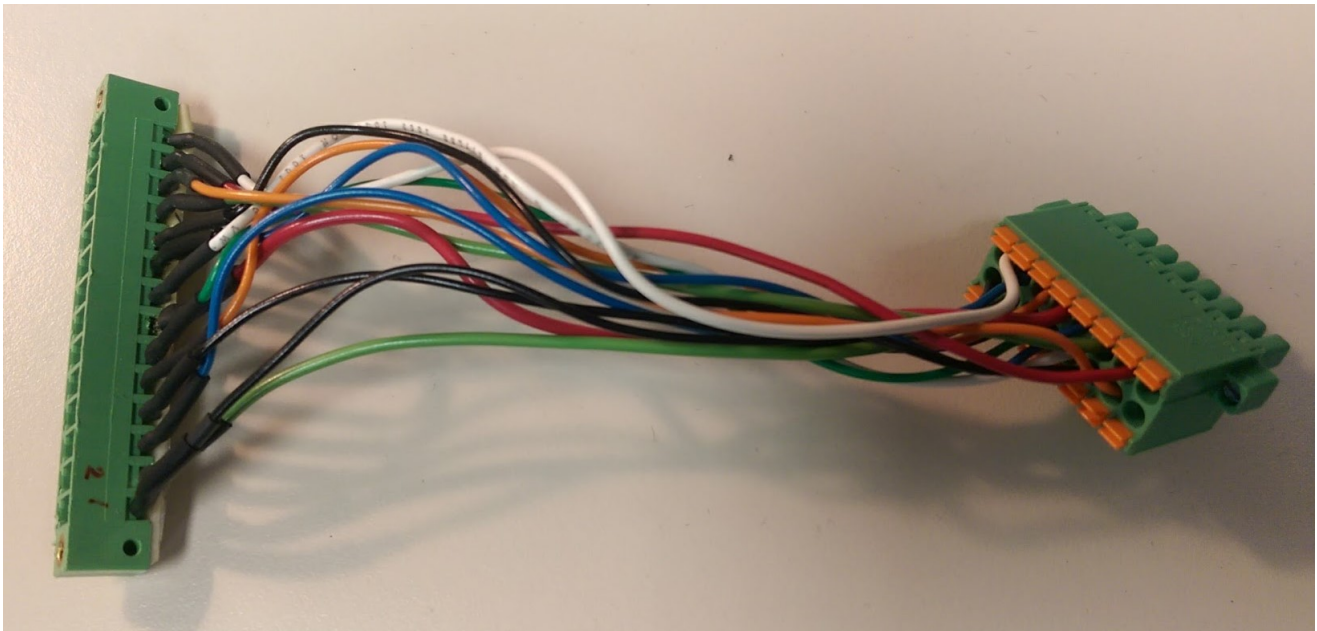

Phoenix Contact P/N 1827826 (14 pin terminal block plug)

Phoenix Contact P/N 1843910 (14 pin header/recepticle)

Alien P/N ALX-430 (for F800/F800-X)

Final result may look something like this:

(from left to right) 9900/9900+ GPIO connector plugs in here,

then dual-row F800 connector plugs into F800 GPIO

Pinout to Pinout Mapping

Function	9900/9900+ Pin #	F800/F800-X Pin#
V+ (in)	1	1
Output 1	2	3
Output 2	3	4
Output 3	4	5
Output 4	5	6
Output 5	6	7
Output 6	7	8
Output 7	8	9
Output 8	9	10
Input 1	10	11
Input 2	11	12
Input 3	12	13
Input 4	13	14
V- (in)	14	2
12VDC out	n/a	15
-12VDC out	n/a	16

Please note native 12VDC power is only available with F800/F800-X when powered by 12VDC power. All other GPIO mapping and functionality is 100% transparent per the pin mapping chart above.