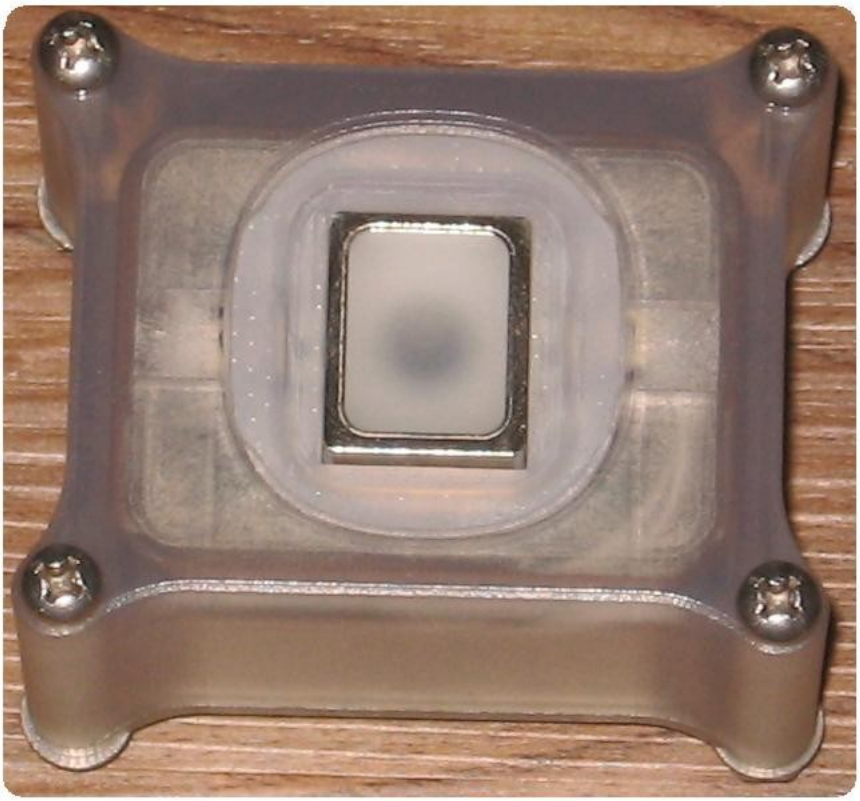


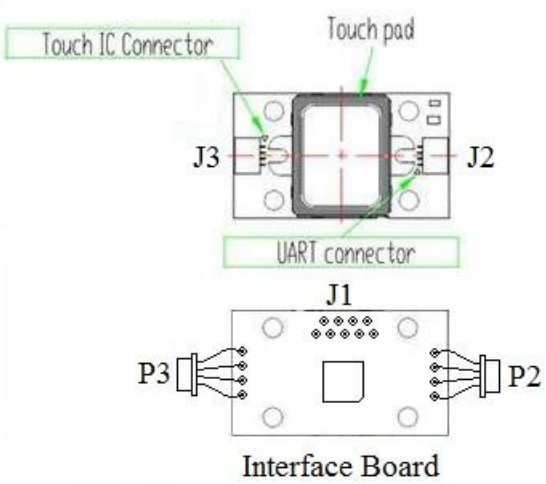
DESCRIPTION

The interface board is intended for use with a programmed ADH-Tech GT-52 series finger print scanner containing a user loaded database of less than 200 finger print templates. When shipped the ADH-Tech finger print scanner data base is blank and MUST be programmed or loaded with finger print templates per ADH-Tech instructions. The ADH_Tech SDK contains the executable used to load finger print templates into the Scanner database. This executable MUST be used to load the Scanner data base with finger print templates prior to this device being used in any end system or application. Please download the SDK and follow ADH-Tech instructions to load the scanner database with finger print templates. The ADMIN CABLE outlined in Figure 2 is a common USB cable which connects between the FPS assembly and a Host PC running the ADH-Tech SDK executable.

Electrical Specifications

Input Voltage: +5 to +15 Vdc, about 200ma. J1-8 DC Positive to J1-3 DC Ground,

Output: J1 Pin 6. 4401 NPN Transistor Collector pulled up to +3.2vdc;
Output goes HIGH (3.2v) when good finger print is scanned.
+3.2v is current limited with 1000 ohms resistor. This can be made into an 'Open Collector' by removing R3 (1k ohm on Vreg side of board.)



J1 Pin Connections
1 - n.c
2 - n.c.
3 - DC_Ground
4 - n.c.
5 - n.c.
6 - On/Off Output
7 - n.c.
8 - +5vdc to +15vdc
9 - n.c.

Fig. 1

Figure 1 shows the ADH-Tech scanner with touch pad facing up and the Black Feather Systems interface board with the PIC16F18877 facing up. Connections are P2-J2 and P3-J3. J1 Pin Connections are the connections to the bulk-head 9 pin D-SUB connector on the FPS cover and are the external interface.
Please make no connections to the 9 pin D-SUB connector pins 1 through 5 as these are for Black Feather Systems use only and have no end user application.

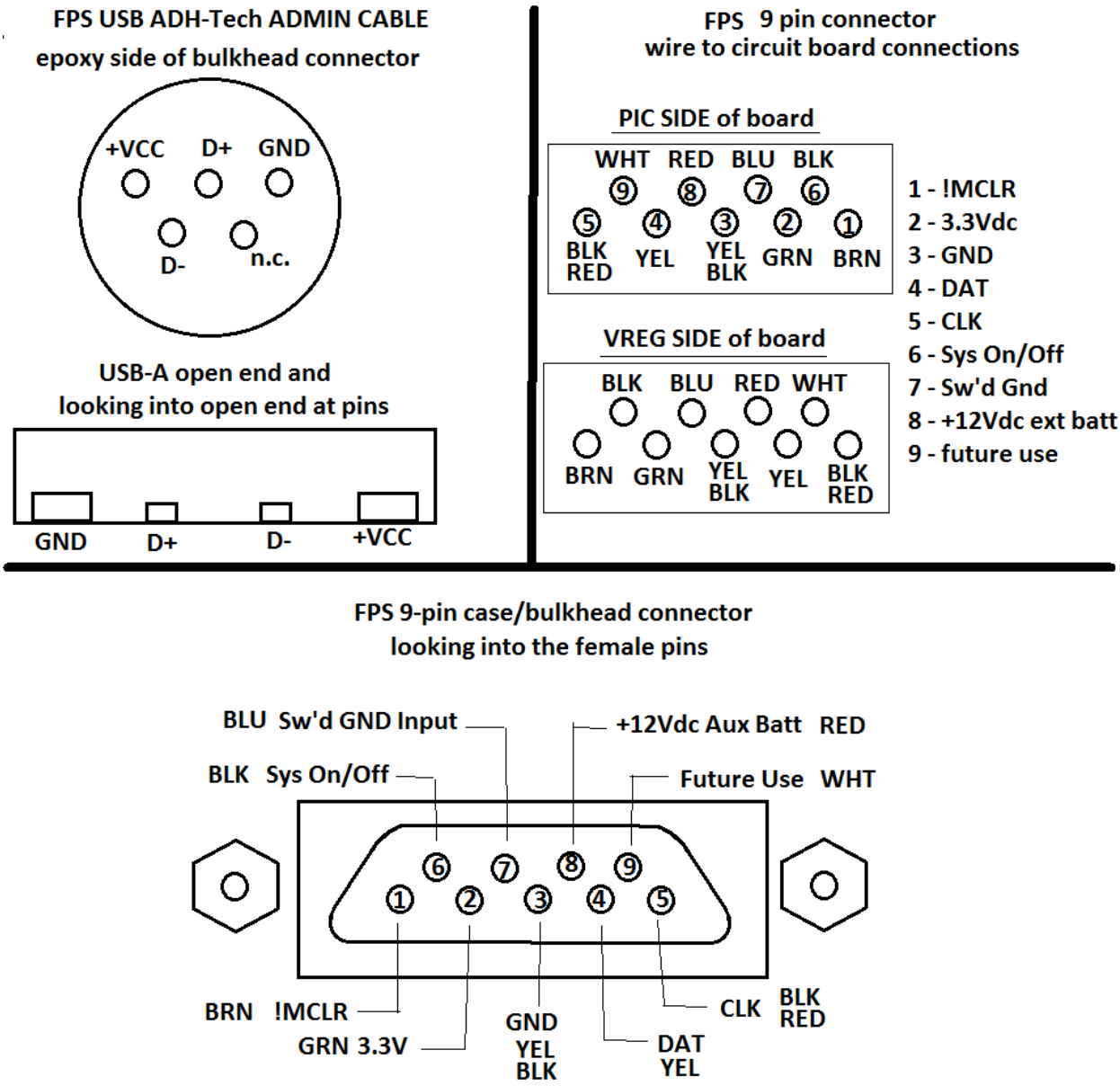


Fig. 2

Figure 2 outlines the pin functions for each connector on the final assembly. The ADMIN CABLE is a USB cable used to connect to a USB port on a PC running the ADH_Tech SDK.

OPERATION

The Black Feather Systems Finger Print Scanner Interface allows the convenience of a biometric scan to control an end application.

1. Load the desired number of biometric templates via the ADH-Tech PC based SDK executable. Multiple orientations of the same biometric indicator allow greater flexibility when a scan is performed. Please remember this version of Black Feather Systems Interface is limited to 199 biometric database templates.

2. After power is applied simply apply the biometric indicator to the scanner window surface.

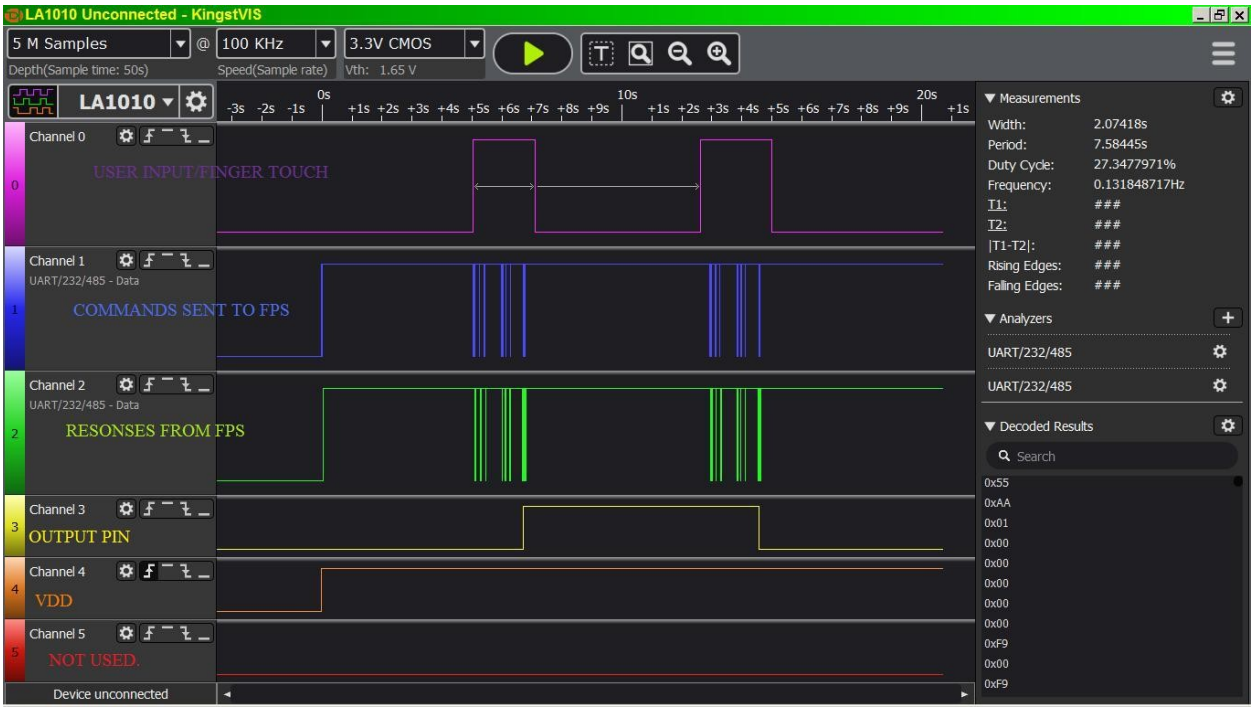
3. The scanner will perform a quick illumination to indicate the device recognized being touched. After an approximate one second delay the window surface will illuminate indicating a biometric scan is in progress.

4. When the illuminate extinguishes remove the biometric indicator from the scanner window surface.

5. The scanner performs a database look up of the captured biometric indicator.

6. With an exclusively successful match the control output is toggled.

See the next page for a logic analyser screen capture of the signaling protocol.


LA1010 Unconnected - KingstVIS
5 M Samples
Depth(Sample time: 50s)
@
100 KHz
Speed(Sample rate)
3.3V CMOS
Vth: 1.65 V
LA1010
0s
10s
20s
Channel 0
USER INPUT/FINGER TOUCH
Channel 1
UART/232/485 - Data
COMMANDS SENT TO FPS
Channel 2
UART/232/485 - Data
RESONSES FROM FPS
Channel 3
OUTPUT PIN
Channel 4
VDD
Channel 5
NOT USED.
Device unconnected
Measurements
Width: 2.07418s
Period: 7.58445s
Duty Cycle: 27.3477971%
Frequency: 0.131848717Hz
T1: ###
T2: ###
|T1-T2|: ###
Rising Edges: ###
Falling Edges: ###
Analyzers
UART/232/485
UART/232/485
Decoded Results
Search
0x55
0xAA
0x01
0x00
0x00
0x00
0x00
0x00
0xF9
0x00
0xF9