FINGERTEC

SM900-01

AC900 Series Fingerprint Reader Service Manual

MARCH 2006 • VERSION 1

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Chapter 1: General Descriptions of AC900 Series Fingerprint Reader

Model	:	**AC901 / AC902 / AC903**
Template Size	:	**1k (AC901) / 1.5k (AC902) / 2.8k (AC903)**
Transaction Storage	:	**30k (AC901) / 100k (AC902) / 120k (AC903)**
Communication	:	**RS232, RS485, TCP/IP, Wiegand**
Identification Time	:	**< = 2s**
FAR	:	**< = 0.0001%**
FRR	:	**< = 1%**
Time Zone	:	**50 settings**
Temperature	:	**0 - 45°C**
Power	:	**12VDC @ 1A**
Size	:	**89(W) x 188(H) x 36(D) mm**

Overview

- One to many identification
- One to one verification
- 10 fingers enrollment per user
- Allow rotation of fingerprint placement
- Possess storage capacity of 100000 transactions
- Offer easy enrollment and fast clocking system
- RS232, RS485, Ethernet, Wiegand 26-bits communication interface.
- Easy to use software
- Complete with buzzer feature
- Automatic activation of alarm in the event of break in, door ajar and illegal dismantle of reader
- All-in-one reader, no external controller needed.

Chapter 2: Components – Details and Functions

2.1 Details of Parts

2.1.1 LCD Display Unit

LCD display board for AC900 series is as shown in Figure 2.1. The LCD function is to display text messages to user. It will prompt the user for necessary actions. For AC900 series reader, the dimension of the LCD screen is

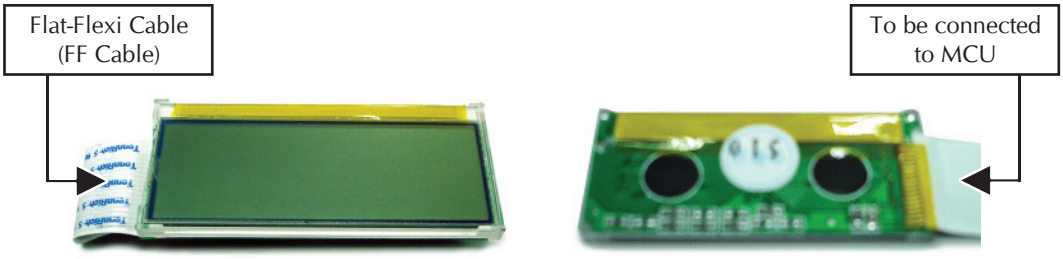

Figure 2.1 Front view of LCD Display Unit

Figure 2.2 Back view of LCD Display Unit

The Flat-Flexi cable (FF cable) is connected to the MCU (main controlling unit). When connecting this FF cable, notice the blue stripe of FF cable should face up as shown in Figure 2.3. Improper connection could cause no display on screen.

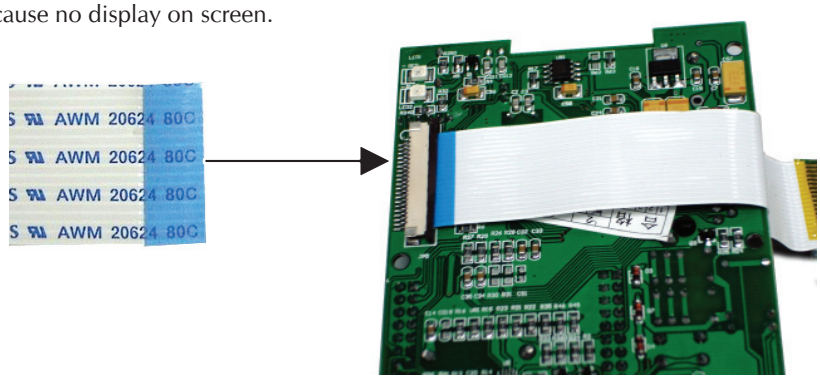

Figure 2.3 Connecting LCD Display Unit into MCU

2.1.2 Keypad Board

Keypad board is connected to MCU. There are 16 buttons on the board. Each button indicates different numbers and functions. The keypad board is the main input for the reader. It allows user to input ID, password and perform some essential operations during registration and configuration of the reader.

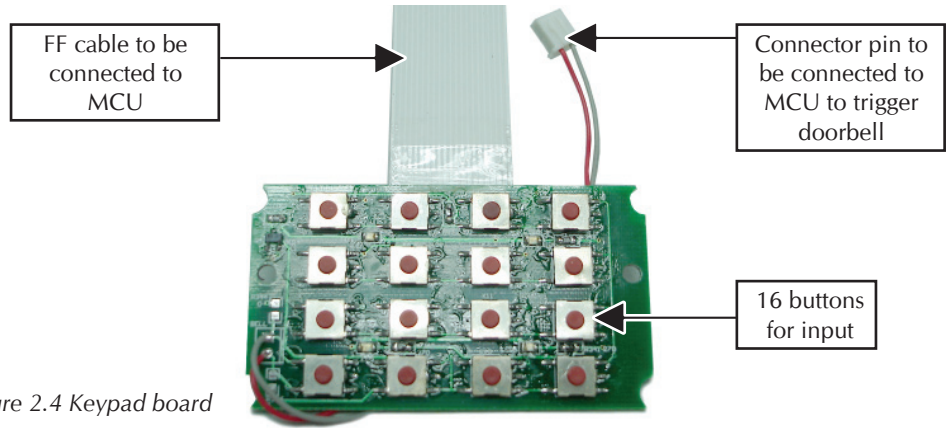

Figure 2.4 Keypad board

2.1.3 Optical Fingerprint Scanner

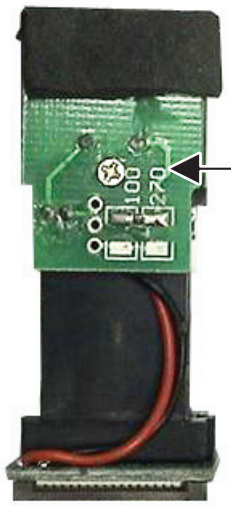

Figure 2.5 Back view of scanner

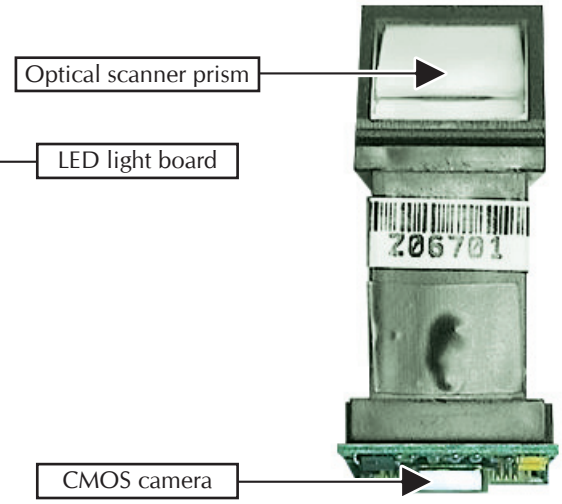

Figure 2.6 Front view of scanner

Optical finger print scanner function is to capture user's fingerprint image to be sent to the Core board (Figure 2.8) for verification or identification processes.

User places finger on the prism and fingerprint will be magnified as a clear image. The normal scanner is without coating and it could be replaced to a better scanner with coating. The optical fingerprint scanner is equipped with a 500dpi CMOS camera. The optical camera will capture fingerprint and convert it into digital format. A Flexi-Flat Cable (FFC) connects the scanner to the core board.

Optical scanner is connected to memory board by FF cable. Improper connection may cause the scanner to not functioning. Please refer to Figure 2.7 and Figure 2.8 for details in connection.

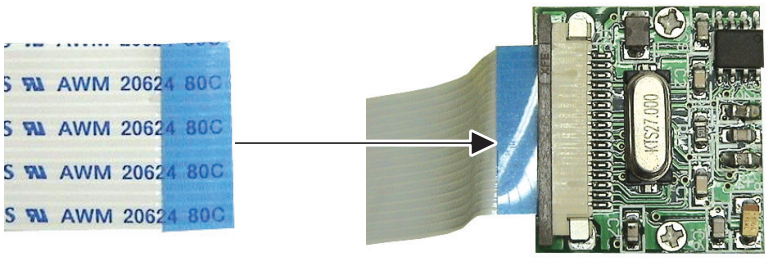

Figure 2.7 Bottom view of optical scanner

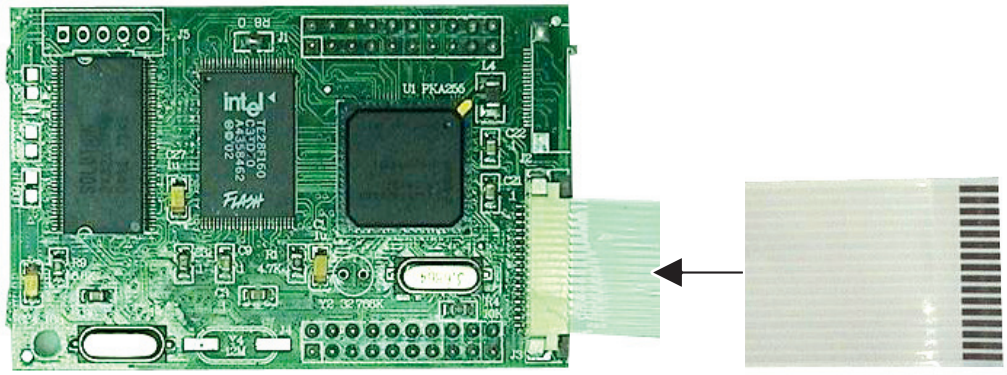

Figure 2.8 Connection of Core board to scanner by FFC cable