

# FINGERTEC



**AC100 • AC100 PLUS SERIES**  
FINGERPRINT TIME & ATTENDANCE SYSTEM

**HARDWARE USER MANUAL**

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## 1 • GETTING STARTED

### INTRODUCTION TO FINGERTEC® AC100 FINGERPRINT READER

The FingerTec® AC100 models function to record time and attendance of employee. For FingerTec® AC100 models, there are two series available. AC100 is the standard unit and AC100 Plus is the high-end unit with URU 4000 sensor. The difference of the two series of model AC100 are tabled in page 5. FingerTec® AC100 models provide simpler and better solution for time attendance management.

Specifications		Model
Series	AC100 	AC100 Plus 
Surface finishing	ABS	
Functions	Time Attendance System	
FP template capacity	1500 (AC102) , 2800 (AC103)	1500
Transaction log	100000 (AC102),120000 (AC103)	30000
Connections	TCP/IP, RS232, RS485	TCP/IP, RS232, RS485, USB Flash Disk
Subnet mask & Gate way	Available	
Card reader	Not available	
Card capacity	Not available	
Sensor	Optical sensor with silicon coating	URU 4000B Module with silicon coating
Work code function	Not available	Available
Software available	<b>TCMS U2</b> <b>Language available :</b> English, Arabic, Chinese Simplified, Chinese Traditional, French, German, Indonesian, Malay, Russian, Farsi, Portuguese, Spanish, Thai and Vietnamese.	

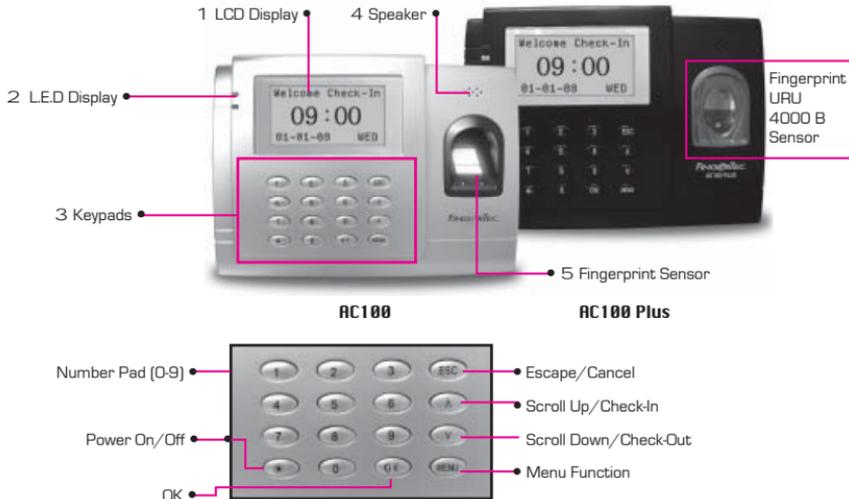
## Complete Package - FingerTec® AC100 Model

ITEM	AC100	AC100 Plus
Fingerprint reader	√	√
5V Power Adapter <b>Note:</b> Make sure the output is 5V 2A or please use the power adapter provided.	√	√
RS485 Cable Extender	√	√
Software CD	√	√
RS232 Cable	√	√
USB Pen Drive	X	√
USB Extension	X	√

## Materials provided with FingerTec® AC100 Model

	AC100	AC100 Plus
Quick Start Guide	✓	✓
Hardware User Manual	✓	✓
Software User Manual	✓	✓
Video Guide for Hardware	✓	✓
Video Guide for TCMS V2	✓	✓
Sample of enrollment form	✓	✓

## Basic Features of FingerTec® AC100 Model



## 1 LCD Screen

Screen that displays instructions and status of the reader.

## 2 L.E.D Display

The two lights, red or green to indicate success or failure of fingerprint identification/verification

## 3 Keypads

Keys from 0-9, a Power on and off button, an OK button, an Escape/Cancel button, a Scroll up/Check-In button, a Scroll Down/Check-Out button, a doorbell button and a menu button.

## 4 Speaker

Indicating success or failure of fingerprint identification by voice greetings.

## 5 Fingerprint Sensor

For user to place fingerprint for identification/verification. AC100 is using optical sensor and AC100 Plus is using URU 4000 sensor.

### Types of scanner



#### Optical scanner

Standard scanner to capture fingerprint image



#### URU 4000 scanner

Enhanced scanner with 512dpi to capture better fingerprint image

## 2 • USING THE FINGERTEC® FINGERPRINT READER

FingerTec® fingerprint reader provides 3 types of enrollment method:

- **Fingerprint Enrollment**

User enrolls his fingerprint template into a reader and the template will be used for future verifications.

- **Password Enrollment**

For user who has difficulty to enroll his fingerprint due to poor fingerprint quality, he is recommended to enroll password. Password enrollment is also suitable for visitors and temporary workers.

- **Fingerprint and Password Enrollment**

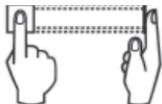
Under this option, a user can enroll both fingerprint and password at the same time. The user can either use fingerprint or password to report attendance or to gain access.

### USING THE FINGERPRINT READER

This chapter will guide on how to use the FingerTec® fingerprint reader effectively. To get a good reading every time, a fingerprint enrollment for the first time must be done properly.



### What you should do



Place finger flat on the fingerprint sensor. Make sure the finger's midpoint is placed at the center of the fingerprint sensor.

### What you should NOT do



UPRIGHT



ASKEW



OFF CENTER



PART

## TIPS FOR BEST FINGERPRINT ENROLLMENT

There are 5 tips to get good fingerprint enrollment:

- **Use INDEX finger**

Index finger is smaller than thumb and it can be comfortably placed on the sensor. The use of thumb is not recommended because the center points might not be placed properly on the sensor, hence cannot be read by the sensor due to its larger size.

- **Make sure the finger is not wet, too dry, injured or dirty**

The finger needs to be slightly moist to enable the sensor to read the minutiae points on the fingerprint.

- **Place the center points of your finger at the center of the sensor**

The center points of a finger is an area where there is a swirl and the center points must be properly placed on the sensor during enrollment.

- **Don't press hard at the sensor, just place your finger on the sensor**

The sensor is reading minutiae points of your finger and placing a finger properly on the sensor will prompt the sensor to read those points. Pressing your finger hard on the sensor is not necessary.

- **Don't do enrollment under bright light or direct sunlight**

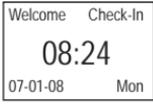
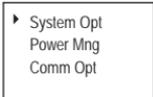
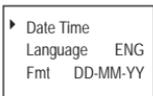
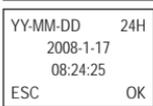
It is important to note that bright light or sunlight could interfere with the reading of the sensor. Avoid placing the reader under direct sunlight or bright light to avoid difficulty in enrollment and future verification.

# INITIAL SET UP OF THE FINGERTEC® FINGERPRINT READER

## Date/Time Adjustment

When first installing the FingerTec® fingerprint reader, it is important to set the correct date and time.

Follow the steps below to access the Date/Time adjustment menu:

When you see this	Do this
	 Press once
	 Press once  Press once
	 Press once
	 Press once
	Use the keypad to key in the year, month and date. Scroll down more to change the day, hour, minute and seconds  Press once



**When you see this****Do this**

Welcome Check-In  
**08:24**  
 07-01-08 Mon

 Press once

▶ User Manage  
 Options  
 Sys Info

 Press once

Enroll User  
 ▶ Enroll Admin  
 Delete

 Press once

 Press once

▶ Enroll FP  
 Enroll Pwd  
 FP & Pwd

 Press once

Admin Accredit  
 Supervisor  
 ESC OK

 Press once to confirm or  
 Press once to cancel operation

Enroll FP  
 New Enroll  
 ESC OK

 Press once to confirm or  
 Press once to cancel operation

New Enroll  
 User ID 00001  
 ESC OK

Press 1 on the keypad for ID  
 00001  
 Press once to confirm or  
 Press once to cancel operation

**When you see this****Do this**

New Enroll  
 00001  
 Place Finger...  
 ESC/Exit

Place the center point of fingerprint properly on the sensor. Place fingerprint 3 times during enrollment.



Read [page 11](#) for tips on fingerprint scanning technique.

This shows templates has been successfully captured; and "0" means that the first fingerprint template is recorded.

New Enroll  
 00001-0  
 ESC OK [Save]

 Press once to confirm or  
 Press once to cancel operation

New Enroll  
 Continue?  
 ESC OK [Save]

 Press once to add backup fingerprint for enrolled user ID. or  
 Press once to add new user

Backup Enroll  
 00002-1  
 Place Finger...  
 ESC/Exit

Place the center of your fingerprint properly at the sensor. Place the fingerprint 3 times in order for the reader to capture the fingerprint templates.

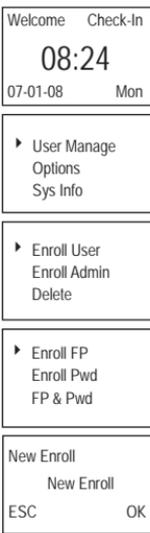
Backup Enroll  
 User ID 00001-1  
 ESC OK [Save]

This shows templates has been successfully captured; the ".1" means template of the second finger is captured good.  
 Press once to confirm or  
 Press once to cancel operation

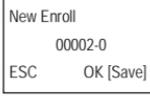
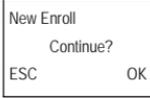
**Congratulations!** A supervisor has been enrolled in the system. As a supervisor, he can manage the FingerTec® fingerprint reader by adding users, deleting users and various other functions through the keypad.

## Enrollment of Normal User

A normal user is only allowed to use FingerTec® reader for identity verification, and he does not have any other authorities to access the system. To add a normal user, follow the steps below:

When you see this	Do this
	<p> Press once</p> <p> Press once</p> <p> Press once</p> <p> Press once</p> <p> Press once to confirm or  Press once to cancel operation</p>

To enroll more users, repeat the same steps above.

When you see this	Do this
	<p>Press number 2 on the keypad for ID 00002</p> <p> Press once to confirm or  Press once to cancel operation</p>
	<p>Place the center point of your fingerprint properly at the sensor. You need to place your fingerprint 3 times for your reader to capture your fingerprint template.</p>
	<p>This shows template has been successfully captured; the "0" means template of first finger is captured good.</p> <p> Press once to confirm or  Press once to cancel operation</p>
	<p> Press once to add backup fingerprint for enrolled user ID, or  Press once to add new user.</p>
	<p>Place center point of fingerprint properly at the sensor. Place the fingerprint 3 times for your reader to capture your fingerprint template.</p>
	<p>This shows template has been successfully captured; the "-1" means template of first finger is captured good.</p> <p> Press once to confirm  Press once to go back</p>

## Fingerprint Verification

FingerTec® reader supports 2 types of fingerprint verification method. User can choose either method to verify his fingerprint at the FingerTec® reader. 2 types of fingerprint verification methods are:

- 1 to Many (1:N) fingerprint matching
- 1 to 1 (1:1) fingerprint matching

### 1 to Many (1:N) Fingerprint Matching

When you see this	Do this
-------------------	---------

Welcome	Check-In
08:24	
07-01-08	Mon

Place the enrolled finger properly on the fingerprint sensor.

FP Verify
Remove finger

Wait a second before removing the finger from the fingerprint sensor.

FP Verify
User ID 00001
Verified

FingerTec® reader verifies that the user ID is 00001.

FP Verify
Please Try Agn.

If a finger failed to be verified by the FingerTec® reader, it will prompt the user to try again.

### 1 to 1 (1:1) Fingerprint Matching

When you see this	Do this
-------------------	---------

Welcome	Check-In
08:24	
07-01-08	Mon

Key in the user ID as defined when enrolling a finger on the FingerTec® fingerprint reader. For example 1 for 00001.

1:1 FP Verify	
User ID 00001	
ESC	OK[Pwd]

Place the enrolled finger properly on the fingerprint sensor.

1:1 FP Verify
User ID 00001
Verified

The FingerTec® fingerprint sensor verifies that the user ID is 00001.

1:1 FP Verify
User ID 00001
Please Try Agn.

If a finger failed to be verified by the FingerTec® reader, it will prompt the user to try again.

## Password Enrollment

For user who cannot enroll his fingerprint, he can choose to use passwords. Follow the steps below:

### When you see this | Do this

Welcome Check-In 08:24 07-01-08 Mon	 Press once
▸ User Manage Options Sys Info	 Press once
▸ Enroll User Enroll Admin Delete	 Press once
▸ Enroll FP Enroll Pwd FP & Pwd	 Press once  Press once
New Enroll New Enroll ESC OK	 Press once to confirm or  Press once to cancel operation

### When you see this | Do this

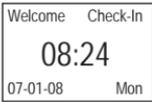
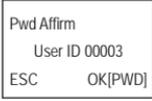
New Enroll User ID 00003 ESC OK	Press number 3 on the keypad for ID number 00003  Press once to confirm or  Press once to cancel operation
New Enroll Input Pwd**** ESC OK	Key in the password Maximum 5 characters in length  Press once to confirm
New Enroll Input Pwd**** Pwd Affirm***** ESC OK	Retype the password for confirmation and  Press once to confirm
New Enroll 00003-P ESC OK [Save]	The "-P" shown means that password has been successfully recorded.  Press once to confirm or  Press once to cancel operation

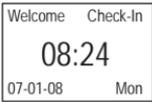
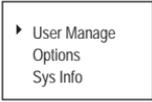
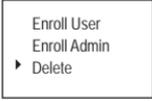
## Password Verification

User with password enrollment can always use password to report attendance or gain access from the FingerTec® readers.

## Deleting Users

The FingerTec® system also allows deletion of user from the system. This is important as employees come and go. Therefore, for those who had left the company, their fingerprint templates or records must be deleted from the system to avoid any misuse of the system. Only an administrator or a supervisor has the rights to delete user. Follow the steps below to delete any user:

When you see this	Do this
	Key in the user ID by using keypad
	Press OK to confirm that it is the correct ID.  Press once to confirm
	Key in the matching password by using keypads  Press once to confirm
	The FingerTec® fingerprint reader verifies that user ID user ID is 00003

When you see this	Do this
	 Press once
	 Press once
	 Press 2 times  Press once
	 Key in user ID Press once

**When you see this** | **Do this**

Del Fingerprint  
1-0  
ESC OK

-  Press once to confirm or
-  Press once to cancel operation

Del User  
1  
ESC OK

-  Press once to confirm or
-  Press once to cancel operation

Del User  
Delete  
ESC OK

-  Press once to confirm or
-  Press once to cancel operation

User will be deleted from the reader following the above steps.

**Note**

Remember to key in the correct User ID for deletion.

### 3 • THE OTHER FUNCTIONS

## SYSTEM OPTION

Options ▾
▶ System Opt
Power Mng
Comm Opt

System option enables user to configure the following areas:

- Date & Time Setting
- Date & Time Format
- Languages
- Advance Options

<b>Reset Opt</b>	to restore all settings back to original factory settings
<b>Del Attlogs</b>	to clear all attendance log stored in reader
<b>Clear all Data</b>	to clear all user data (i.e user name, ID number)
<b>Clr Admin Pri</b>	to clear administrator's privilege
<b>Show Score</b>	to show the quality of image captured during verification, the maximum is 50
<b>Match Thr</b>	to configure sensitivity of the optical sensor for 1:N matching
<b>Only 1 to 1</b>	to disable 1:N matching method
<b>1:1 Thr</b>	to configure sensitivity of optical sensor for 1:1 matching
<b>Voice</b>	to adjust the volume of greeting voice

## POWER MANAGEMENT

Options ▾
System Opt
▶ Power Mng
Comm Opt

This is to configure FingerTec® reader to turn on/off, sleep/standby mode.

<b>Shut down</b>	to enable a specific time for reader to shut down
<b>Power On</b>	to enable a specific time for reader to power on
<b>Sleep</b>	to specify time for reader to go into sleep mode when it is not in used
<b>Idle</b>	to disable or enable sleep mode
<b>Idle Min</b>	to specify a time interval for reader to go into sleep mode

## COMMUNICATION OPTION

Options ▾
System Opt
Power Mng
▶ Comm Opt

This is to configure communication settings of FingerTec® readers. User can choose the type of communication (TCP/IP, RS232 or RS485). Improper settings will cause connection to computer to fail.

Those options are:

<b>Baud rate</b>	to adjust baud rate of connection with RS232 or RS485
<b>Dev num</b>	the number of reader in an installed environment
<b>IP Addr</b>	to configure the IP address of reader
<b>Net speed</b>	to adjust the speed connection of Ethernet
<b>Netmask</b>	to configure netmask to suit reader into local area network.
<b>Gateway</b>	to configure gateway to suit reader into local area network.
<b>Ethernet</b>	to enable or disable Ethernet as communication method
<b>RS 232</b>	to enable or disable RS232 as communication method
<b>RS 485</b>	to enable or disable RS485 as communication method
<b>COMM key</b>	communication key between reader and software, always set to "0"

## LOG OPTION

Options ▾
Power Mng
Comm Opt
▶ Log Opt

If FingerTec® reader has capacity storage limit of a maximum 100,000 transaction logs and to ensure that all transactions are intact in the reader, user can adjust the warning level of transaction storage to for example 40,000 or 45,000. When the transaction storage reaches the warning level, FingerTec® reader will alert users with a beep.

<b>Alm SuperLog</b>	to instruct reader to alert user if the transaction storage of administrator login is less than as configured, default is 99.
<b>Alm AttLog</b>	to instruct reader to alert user if the transaction storage is less than as configured, default is 99.
<b>ReCheck Min</b>	to instruct reader to update clocking times of all user in a time interval, default is 10 minutes.

## AUTO TEST

- Options ▾
  - Comm Opt
  - Log Opt
  - ▶ Auto test

This option allows FingerTec® resellers/technician to run test to the reader to identify any error. Please do not run test without guidance/supervision from FingerTec® resellers/technicians.

## SYSTEM INFO

- Options ▾
  - Log Opt
  - Auto test
  - ▶ Sys Info

User may check the information stored in the reader under this option.

The information includes:

<b>User Cnt</b>	to show total of users in reader	
<b>FP Cnt</b>	to show total of fingerprints templates in reader	
<b>Att Log</b>	to show total of attendance log in reader	
<b>Admin Cnt</b>	to show total of administrators in reader	
<b>Pwd Usr</b>	to show total of password users in reader	
<b>Super Logs</b>	this item is used by FingerTec® technicians for testing purpose	
<b>Free Space Inf</b>	to show empty spaces which are available in reader	
<b>Dev Info FPCnt</b>	<b>(100)</b>	to show the number of fingerprints templates stored in reader
	<b>AttLog (10k)</b>	to show the amount of attendance log could bestored in reader
	<b>Super Logs</b>	for testing purpose
	<b>Manu time</b>	manufacturing time of reader
	<b>Serial Num</b>	serial number of reader
	<b>Manufacturer</b>	name of manufacturer
	<b>Device name</b>	name of reader
<b>Alg Version</b>	to show the algorithm version use by the reader	
<b>Firmware ver</b>	to show the firmware version use by the reader	

## 4 • ADDITIONAL FUNCTIONS (For AC100 Plus only)

### ADVANCED OPTIONS

#### Two Sensors

AC100 Plus supports additional URU 4000 sensor (scanner) for fingerprint enrollment and reading. If you find the embedded sensor on the reader is not functioning, you can connect an OFIS URU sensor via a USB cable to the reader. This additional sensor can be used as a backup to continue with fingerprint enrollment or reading of your daily operation. You can contact your local dealer to purchase this additional OFIS URU 4000 sensor as a backup.

The Two Sensor option in reader must be enabled to have this function working.

#### When you see this | Do this

Welcome Check-In 08:24 07-01-08 Mon	 Press once
Menu User Manage ▶ Options PenDriveMng	 Press once  Press once
Options ▶ System Opt PowerMng Comm Opt	 Press once
System Opt Language ENG Fmt YY-MM-DD ▶ Adv Opt	 Press 3 time  Press once
Adv Opt Only 1 To 1 N 1:1 Thr 35 ▶ Two Sensor N	 Press 8 time  Press once  Press once or  change to Y  Press once after choosing Y
System Option Save? ESC OK(Save)	 Press once  Press 3 time to return to main menu

## Upd Firmware

User could update the firmware version of a FingerTec® reader by using a flash disk. Before a user plugged in the pen-drive into a reader, please make sure that the firmware file has been copied to the flash disk. Choose "Upd Firmware" option as shown on the LCD and the reader will request user to plug in the flash disk. Plug the flash disk carefully and press "OK" to start the updating process.

Performance of a reader will be enhanced after the firmware flash disk is upgraded. Please consult your local dealer for firmware upgrade patch files as and when necessary.

### When you see this | Do this

Welcome Check-In  
08:24  
07-01-08 Mon

 Press once

Menu ▾  
User Manage  
▶ Options  
PenDriveMng

 Press once

 Press once

Options ▾  
▶ System Opt  
PowerMng  
Comm Opt

 Press once

System Opt ▲  
Language ENG  
Fmt YY-MM-DD  
▶ Adv Opt

 Press 3 time

 Press once

Adv Opt ⇅  
Two Sensor N  
Voice Y  
▶ Upd Firmware

 Press 10 time

 Press once

Plug Pen Drive

Make sure a flash disk is inserted properly. Press OK to unplug the flash disk when the process completes.

Copy Date succ

 Press once

## Work Code

AC100 Plus provides Work Code feature. The work code feature allows a user to key in a predefined number after fingerprint or password verification. User can key in related work codes to show purpose of their clocking data. Table below showing examples of word code function predefined by numbers.

Reasons Work	Code
Check In	00
Check Out	01
OT Start	04
Done	05
Sick Leave	10
Emergency Leave	11
Half Day Leave	12
Meeting Client	20
Outstation	21

These numbers are predefined by user in software and represent different reasons, such as "10" for Sick Leave, "11" for Emergency Leave.

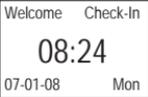
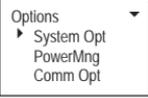
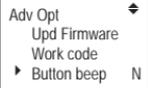
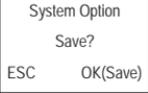
Please follow the steps below to enable or disable the Work Code feature.

## When you see this | Do this

Welcome Check-In <b>08:24</b> 07-01-08 Mon	 Press once
Menu ▾ User Manage ▶ Options PenDriveMng	 Press once  Press once
Options ▾ ▶ System Opt PowerMng Comm Opt	 Press once
System Opt ▲ Language ENG Fmt YY-MM-DD ▶ Adv Opt	 Press 3 time  Press once
Adv Opt ◀ Voice Y Upd Firmware ▶ Work code N	 Press 11 time  Press once  Press once or  change to Y, to enable the option  Press once
System Option Save? ESC OK(Save)	 Press once  Press 3 time to save settings

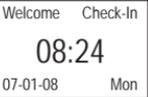
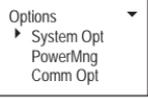
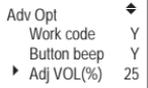
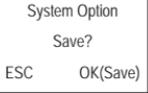
## Button Beep

Button Beep function is to enable emission of a beep sound when the buttons on the keypad are pressed. This function is optional and user may choose to enable or disable it by selecting "Yes" or "No".

When you see this	Do this
	 Press once
	 Press once  Press once
	 Press once
	 Press 3 time  Press once
	 Press 12 time  Press once  Press once to change to Y, to enable the option
	 Press once

## Adj VOL(%)

User could adjust the volume of a speaker in the FingerTec® Plus Series models. The volume parameter is represented by percentage(%). The higher the percentage is, the louder the speaker will be.

When you see this	Do this
	 Press once
	 Press once  Press once
	 Press once
	 Press 3 time  Press once
	 Press 13 time  Press once key in value [0-100]  Press once
	 Press 3 times to return to main menu

## COMM OPTIONS

### NetMask

The NetMask of a reader could be configured to suit to your network environment. After the of NetMask configuration, reader could be accessed through Internet with valid gateway to download and upload data.

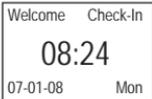
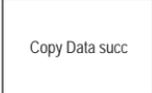
#### When you see this | Do this

Welcome Check-In 08:24 07-01-08 Mon	 Press once
Menu ▾ User Manage ► Options PenDriveMng	 Press once  Press once
Options ▾ System Opt PowerMng ► Comm Opt	 Press 2 time  Press once
Comm Opt ▲ Net speed AUTO IP addr ► Net mask	 Press 4 time  Press once
Net mask 255.255.255.0 ESC OK(Save)	 Press once to move and key in value to change  Press once
Comm Opt ◄ Net speed AUTO IP addr ► Net mask	 Press once
Comm Opt Save? ESC OK(Save)	 Press once to save settings. Restart for reader take effect

# PENDRIIVE MNG

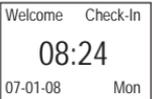
## Download Attendance Log

To download attendance log from FingerTec® reader to a flash disk, plug in the flash disk into the reader and press "OK" to start downloading process

When you see this	Do this
	Plug a flash disk into USB port of the reader.
	 Press 2 times  Press once
	 Press once
	 Press once  Press 3 times to return to main menu

## Download User

To download users from FingerTec® unit to a flash disk, plug in the flash disk into the reader and press "OK" to start user download from reader to flash disk.

When you see this	Do this
	Plug a flash disk into USB port of the reader.
	 Press 2 times  Press once
	 Press once
	 Press once  Press 3 times to return to main menu

## Upload User

To upload users from FingerTec® reader to a flash disk, plug in the flash disk into the reader and press "OK" to start user download from FingerTec® reader to a flash disk.

### When you see this | Do this

Welcome Check-In  
08:24  
07-01-08 Mon

Plug a flash disk into USB port of the reader.

Menu ▾  
User Manage  
Options  
▶ PenDriveMng

▾ Press 2 times

OK Press once

PenDriveMng ▾  
DwnLoad AttLog  
DwnLoad User  
▶ UpLoad User

OK Press once

Copy Data succ

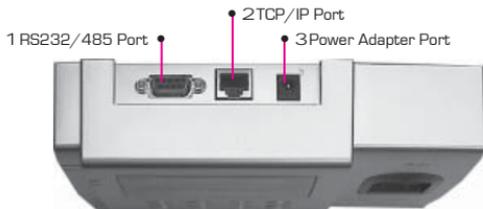
OK Press once

ESC Press 3 times to return to main menu

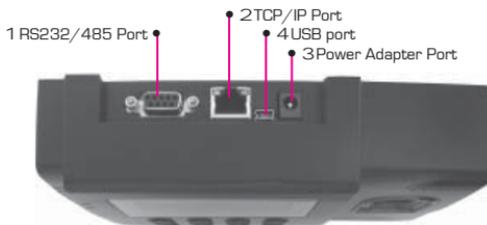
## 5 • INSTALLATION & COMMUNICATIONS

### CONNECTIONS AVAILABLE

From the top side of the FingerTec® AC100 Model, there are three connections available.



If you are using AC100 Plus, there is a USB port available. You can connect the USB extension to this port and connect to USB Flash Disk to transfer data from reader to computer.



#### 1 RS232/RS485 Port

RS232 is a serial communication cable use to connect from this port at one end to a serial port of a PC at another end. RS485 cable extender should be connected to this port and the other end should connect to an optional RS232/RS485 Data Converter before it can be connected to the serial port of a PC.

## 2 TCP/IP Port

A straight RJ45 cable is used to connect to a network switch/hub. A crossover RJ45 cable is used to connect directly to a PC network port.

**Note**

RJ45 is not included in FingerTec® AC100 package.

## 3 Power Adapter Port

Plug in the power adapter provided to get for power supply to the unit.

## 4 USB port

Please connect the USB extension provided into this port when you want to upload or download data into USB flash disk.

## STARTUP AND SHUTDOWN



1. Connect DC 5V power adapter to to the FingerTec® AC100 or AC100 Plus models.
2. Turn on the power supply.
3. Press the power button to switch on or shutdown the reader.

## COMMUNICATION CONNECTION

FingerTec® AC100 model can be connected to computer by four ways:

IP Addr	
192. 168. 1.201	
ESC	OK

Comm Opt	▼
▶ Ethernet	Yes
RS232	No
RS485	No

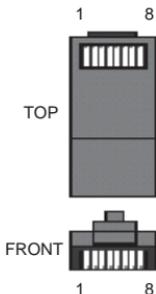
### Note

When RS232/RS485/Ethernet is enabled, only the Ethernet function will be enabled while the RS232/RS485 will be disabled.

### TCP/IP Connection

1. Setup the IP address by network configuration  
The machine default IP address is 192.168.1.201; this is a legal and available IP address in many LAN environment. If the host IP address is 192.168.1.X and it is in the same network region, then this IP can be used directly. If not, please make sure that you have changed the IP address accordingly.
2. Setup of Ethernet.  
Access Menu select "Options" > "Comm. Opt" > "Ethernet", select "Yes" to enable Ethernet function.
3. Turn the power off.
4. Plug the network plug to the Ethernet interface.
5. Turn the power on.

### Ethernet 10/100Base-T Crossover Cable



This cable can be used to cascade hubs, or for connecting two Ethernet stations back-to-back without a hub. It works with both 10Base-T and 100Base-TX.

Joint 1 Pin		Joint 2 Pin	
TX+	1	3	RX+
TX-	2	6	RX-
RX+	3	1	TX+
RX-	6	2	TX-

## Ethernet 10/100Base-T Straight Thru Cable

This cable will work with both 10Base-T and 100Base-TX and is used to connect a network interface card to a hub or network outlet. These cables are also known as "whips".

	Connector Pin	Cable Color	Connector
TX+	1	White/Orange	1
	2	Orange	2
TX-	3	White/Green	3
	4	Blue	4
RX+	5	White/Blue	5
	6	Green	6
RX-	7	White/Brown	7
	8	Brown	8

Comm Opt	▼
▶ RS232	Yes
RS485	Yes

## RS232 Connection

### 1. Setup of RS232

Access to Menu, select "Options" > "Comm. Opt" > "RS232", select "Yes" to enable RS232 function.

2. Turn off the reader.

3. Plug the RS232 cable to the RS232 port of the PC.

4. Plug the RS232 other end to the RS232 joint.

5. Turn the power on.

### Note

When RS232 function is enabled, the Ethernet will be disabled.



## RS485 Single Connection

Comm Opt	▼
RS232	Yes
▶ RS485	Yes

### 1. Setup of RS485

Access Menu, select "Options" > "Comm. Opt" > "RS485", select "Yes" to enable RS485 function.

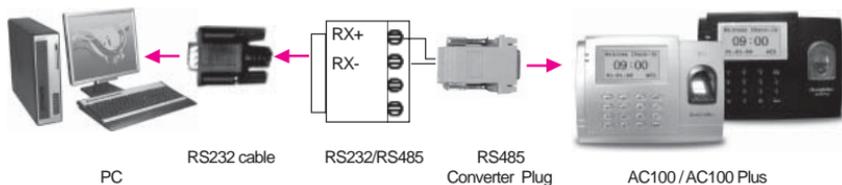
#### Note

When RS485 function is enabled, the Ethernet will be disabled.

2. Turn off the reader.
3. Plug the RS485 cable extender to the connector. Connect another end of the cable to the RS232/485 data converter.
4. Connect the RS485 data converter to the RS232 port of PC.
5. Turn the power on.

#### Note

The RS232/485 converter is an optional component.



## RS485 Network Connection

Comm Opt	▼
RS232	Yes
▶ RS485	Yes

### 1. Setup of RS485

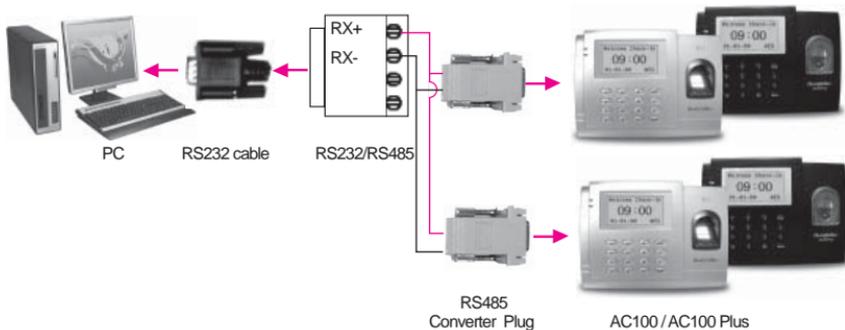
Access Menu, select "Options" > "Comm. Opt" > "RS485", select "Yes" to enable RS485 function.

#### Note

When the RS485 function is enabled, the Ethernet will be disabled.

2. Turn off the reader.
3. Plug the RS485 cable extender to the RS232/485 port on the Power Controller, and another end of the cable to the RS232/485 network.

4. Connect computer to the RS485 network with the RS232/485 converter.
5. Turn the power on.



**1. I can't turn on the FingerTec® Fingerprint Reader. When I pressed the power button, nothing happened.**

- Check if your FingerTec® Fingerprint Reader's LCD screen is lighted and there is a beep sound when the reader is turned on. If not, make sure the power is turned on at the electrical supply outlet.
- Check the connection of the power adapter to an electrical supply outlet; it may not be fitted properly.
- If you are confirmed that there is no problem with the power supply, your FingerTec® Fingerprint Reader may need to be replaced. Kindly contact your reseller.

**2. I can't connect the FingerTec® Fingerprint Reader to the PC. Every time I try it, the software prompts "unable to connect" message.**

First check the settings on the reader to see if TCP/IP or RS232/RS485 connection is enabled.

- Check whether the COMM key is used, default is 0.
- For TCP/IP connection, check the IP address.
- For the RS232/RS485, the baudrate for the reader and software must be the same. Make sure that the DevID is correct.
- After changes are made, restart the FingerTec® Fingerprint Reader.

- 3. The FingerTec® Fingerprint Reader has difficulty recognizing my finger. It takes many tries before I am verified.**
  - Please make sure that your finger is oily or dirty because the oil and dirt will cover up the minutia points of the fingerprint, thus make reading difficult.
  - Make sure that the reader is not facing direct sunlight because direct sunlight will disrupt the readings of the scanner. Cover the scanning area when you want to do finger verification.
  
- 4. When the FingerTec® Fingerprint Reader is on, the red LED is blinking. Is there something wrong?**

There is nothing wrong with the reader. The red LED blinks to indicate that the reader is on the standby mode. When a fingerprint is verified, the LED will turn to green.
  
- 5. The FingerTec® Fingerprint Reader was accidentally shutdown by a staff. Will we lose all the transaction data in the reader?**

All the transaction data up until the minute the reader was shutdown stays in the reader and can be downloaded to the PC by using the TCMS V2 software. The data will only disappear if it is downloaded to the PC.
  
- 6. The FingerTec® Fingerprint Reader did not voice “Thank You” or “Please Try Again” during verification. What should I do?**

You may enable the voice function under Advance Option. The voice option might have been disabled.
  
- 7. When I tried to enroll my fingerprint into the FingerTec® Fingerprint Reader, the reader produced “Duplicate Finger” voice message. Why is that?**

The “Duplicate Finger” voice message will only be produced if the enrolling finger is found to have existed in the reader. Choose another finger.

**8. The FingerTec® Fingerprint Reader produces “The clock is full” every time I perform verification. What should I do?**

This means that the transaction storage of the reader full. Download the data from the reader to the PC by TCMS V2. After download process has been performed, the data will be deleted automatically.

**9. Could I configure the FingerTec® device to shut down or power on automatically?**

The schedule can be configure under the Power Management Option. This is advisable as to let the device takes a break after a long-hour usage.

**10. I lost my USB extension for AC100 Plus. Can I purchase a normal USB extension from my local market?**

Yes. This USB extention is universal and available everywhere.

**11. I have enabled Work Code function. Would each user need to input a number after a verification of fingerprint or password at the AC100 Plus?**

After the Work Code function is enabled, AC100 Plus will only capture user attendance once user is verified and a Work Code is entered for a reader to accept the user's transaction log.